

Aviation News

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Competition Question Threshed Out at CAB: Civil Aeronautics Board members heard exhaustive arguments for and against competition among big and little air carriers when the question of additional service between Boston and New York was debated last week. Left to right, Board members are Oswald Ryan, Vice-Chairman Edward Warner, Chairman L. Welch Pogue, Harilee Branch and Josh Lee.

Hull Maps Senate Committee Talks on World Air Policy

State Dept. to open full-scale program of consultation with Senate groups on problem of post-war organization, Senator Connally reveals.....Page 7

Vast Fruit, Vegetable Potential Discussed at Detroit

Total ranges from six times all airborne express in 1941 at 15 cents per ton mile to 968 times 1941 total at three-cent rate, survey shows.....Page 32

Tightened Draft May Take Many More Plane Workers

Few deferment requests for men under 22 to be supported; technical and engineering branches likely to be hardest hit by new rules.....Page 9

ACCA Clarifies Industry's Stand on Cost-Plus Contracts

Aeronautical Chamber urges continuance of system in view of unusual success in meeting production schedules and quality of planes.....Page 24.

CAB Cites Commercial Hazards in Reinsurance System

Study points out international business relation whereby important data may reach foreign interests to detriment of U.S. world commerce.....Page 34

Domestic Airlines Resume Plans for New Financing

Northwest to offer stockholders rights to subscribe to 117,460 common; National arranges private financing for Jacksonville-N.Y. route.....Page 44

5 reasons why you need x-ray for aircraft production



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THE AVIATION NEWS

Washington Observer

MANPOWER MOVES—Outside of the front-line war news, the Capitol has been turned upside down over the manifold and conflicting pronouncements on manpower. An analysis of the situation indicates that, even if Selective Service puts all the so-called vulnerable in the aircraft industry in the 22-25 age limit, the total will be insignificant against the increased needs of the armed forces. On the other hand, this total, small in comparison, is in the age category most in demand by the armed forces. The effect on the aircraft industry will be marked, of course, since many of these young men are engineers, technicians and other critical workers. But the conclusion seems to be that the aircraft industry might as well prepare to produce as many planes as possible with available personnel, regardless of the departure of men now regarded as vital to schedule-meeting.

PLANE CUT-BACK—It should not be overlooked that a cut-back in aircraft production schedules is not outside the bounds of possibility. Aircraft unit production for the first three months of this year is something over 26,000. The AAF already has cut back its training program for airmen, and if there is a reduction in the aircraft production schedule, more should be in mind.

AAF ADVERTISING—Big advertisements in metropolitan newspapers proclaim that the AAF aviation cadet program is ahead of schedule. The AAF has, the advertisement says, sufficient men in training and in the Air Corps Enlisted Reserve to meet its present schedule for combat crews and therefore must balance this activity with over-all needs. When the conclusion is that the air forces of the moment have more men than they have airplanes, The AAF appears

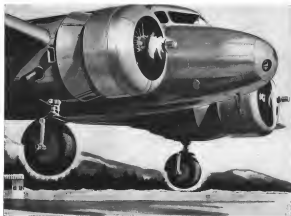
only plans to advance further, since the current statement says, "We shall continue to recruit developments—as that when we invite further active enrollment on our flying teams, the nation will be familiar with our activities and the vital nature of our needs." Most of the information presented in the advertisement was given before a Congressional committee.

MANPOWER UTILIZATION—There are increasing signs of more efficient utilization of manpower in the aircraft industry, according to WPB officials. This is traceable to at least two factors. First, production schedules are now more certain than at any previous time, and second, a higher worker productivity has been made possible by the greater know-how that management and labor have gained during the period since the War production program began. There is little doubt that manpower will become more and more a critical problem and that its various phases will be more widely debated than ever in the months ahead.

RECONVERSION—Action on reconversion legislation continues to be retarded by overlapping jurisdiction of various Congressional committees and controversies over details as well as by conflicting viewpoints of some high officials. This is in the face of what appears to be a rising sentiment in Congress for statutory regulation of conversion programs as against the shaping of policies by executive agencies. As pointed out by Donald Douglas in his dispassionate remarks to his company's stockholders, government has a duty to remove by legislation and prompt equitable action all obstacles and uncertainties in the path of restoration of the company (Douglas) to peacetime activities without delay or impairment.

B-17G Flying Fortress on practice flight with two port engine off and prop feathered





CHALLENGE: MAKE A BRAKE TUBE THAT WILL STOP THIS PLANE AT 65° BELOW ZERO

The new Air Corps spec for BT brake tubes was clear enough. From now on, it said, tubes must function efficiently in any temperature from about 400°F. to -65°F. The high limit wasn't a problem. But that -65° figure—that was a real challenge to B. F. Goodrich engineers. The former low limit was -40°. Here's what they were up against.

Most rubbers, both natural and synthetic, tend to become brittle and crack when faced at low temperatures. This tendency had to be overcome. Then there was another problem. A new brake fluid, used to obtain better disc brake action, was more destructive to the tube.

B. F. Goodrich engineers met the challenge two ways. First, a change was made in the shape of the tube which reduced the flexing required for efficient operation. This greatly relieved the strain on the tube and reduced its tendency to crack. To tick the problem of brittleness, however, and that of the more destructive brake fluid, a completely new synthetic rubber compound was needed.

B. F. Goodrich chemists worked out a compound of a special-purpose synthetic

rubber. Sample tubes were tested (much severely than prescribed by the Air Corps) and results proved the compound could meet Air Corps specifications. Thus, once again, B. F. Goodrich engineering met changing requirements quickly and satisfactorily.



Today, all our research and production facilities are geared to total war. Tomorrow, the "know how" we've gained now will help bring you a world of safer flight. The B. F. Goodrich Co., Aeronautical Division, Akron, O.

MAKERS OF MORE THAN 80 RUBBER AND SYNTHETIC RUBBER AVIATION PRODUCTS

Hull, Congress May Merge Forces In Formulating World Air Policy

State Dept. to open full-scale program of consultation with Senate committee on problem of post-war organization, Sen. Connally reveals.

Capitol Hill and the State Department soon may merge their forces to attend to the urgent business of formulating a national policy on post-war international aviation.

This is believed to be a reasonable expectation following disclosure by Sen. Tom Connally, chairman of the Foreign Relations Committee, that Secretary of State Cordell Hull will launch a full-scale program of consultation with Senate committees concerning the problems of post-war world organization.

Straws in Wind—Keeping the larger issues of diplomacy in mind, one still can foresee readily that the pressure of steadily developing events in the aviation picture will force consideration and perhaps definition of the country's position with respect to post-war overseas operations, as these consultations progress. The experience results from these straws in the wind.

The British have let it be known they consider international commercial aviation will be one of the outstanding issues at the post-war period.

The United States is about to enter exploratory talks with Britain, Canada, Mexico and possibly China, followed by talks with other interested powers, on aviation problems of mutual interest.

Canada has presented to the State Department for study and reaction a fully detailed scheme for an international air organization envisaging freedom of transit.

On the domestic scene, Sen. Pat McCarran has spoken a word on his colleagues of the Senate Aviation Subcommittee by playing all the cards squarely before Congress. The Republican party is warning up the leagues on all matters deal-

ing with American foreign policy.

Aviation circles in Washington, of which there is a wide assortment, reason therefore that more rapid progress in resolving the complex problems of international air transport must be made. They agree that the issues must be thrown wide open in Congress, and the State Department must begin to make more clear its position.

Edison—Already informal liaison

has been established between State and Congress through discussion between members of the Aviation Subcommittee, of which Senator Charles Clark is chairman, and Assistant Secretary of State Abdullah Seris, Jr., who has been handling the matter for the Department. Seris likewise has given the Foreign Relations Committee a limited preview of the question.

McCarran's bill, introduced while Aviation committees cautiously and unburdenedly continued their researches, placed these vital issues in the open.

- Chosen instrument versus regulated competition
- Government versus private-company negotiation with foreign countries
- Air sovereignty versus freedom of transit



MODEL OF NEW 760-MPH WIND TUNNEL:

Hundreds of pressure and speed tests have been conducted on this one-tenth scale, new model of the AAF Material Command's new high speed wind tunnel, to be ready at Dayton next summer. It will have a 10-ft test chamber. Dr. Frank W. Wadsworth (left) began design about two years ago. It will be the largest tunnel in the world with such speed sections, approximating the speed of sound, 765 mph. Models to be tested inside the tube probably will be built of steel to prevent destruction. Maj. Charles Lutz is shown on right.

U.S. Officials Discount Post-War Airline Competition by ATC

Military air transport organizations expected to be kept after armistice for peacetime defense and training but not to detriment of commercial aviation, Washington consensus.

By BLAINE STURGEONFIELD

Strong speculation in air transport circles over possibilities of a peacetime Air Transport Command which would deprive commercial air services of traffic has been met with pledges by several responsible officials that the Army has no intention of maintaining such an operation to the detriment of private lines.

The speculation was stimulated by a recent statement of Air Secretary Archibald Hadden that, in his opinion the British Air Transport Command will become a permanent part of the Royal Air Force and that for years it may be larger, in terms of airplanes, than the British civil air system.

Transportation Expected With War—U. S. Army Air Force commanders, according to one highly placed authority, agreed verbally with persons in the civil air system early in the war that the Air Transport Command will be abolished promptly upon the return of peace.

This understanding is said to have been reiterated as recently as a few months ago.

Most official comment makes a point of the fact that "peace" is a

flexible term. If areas are stacked the world around when the principal enemies collapse or when treaties are written, that is one thing. But if the nation maintains large forces in expectation of action, proportional military transport services might stand for a long time, covering such that commercial lines would like to carry.

Post-War Disturbances—If civil or international war follow this war, and if the United States participated in efforts to quell domestic air transport services cannot be allowed to enter such combat zones, and the military transport services will continue until there is actual peace.

Large scales of cooperation in Axis territory, even if there is general peace, probably would require continuation of a large Air Transport Command. Conceivably some rehabilitation of devastated countries might have to be serviced by military air transport.

Return to Peace Basis—Putting the wartime Air Transport Command back on a peacetime basis probably would take a couple of years after the armistice. The airline contract situation will have to be

terminated by the usual contract cancellation procedure. This should not take long, however, and the disposition of the operators will have to get back to their own business and to their efforts to obtain overseas certificates. One observer said he thought the contractors might want to continue on their military routes while they are seeking certification.

Nearly all interested persons believe the military establishments will make efforts to perpetuate large standing forces indefinitely. Probably the air force will have more success than other defense branches. But they will have to coexist with post-war sympathy to military transport, and with a strong commercial aviation.

Army, Navy Units Established—Almost certainly the Army and the Navy will maintain air transport organizations for strictly military and training work. The Army had a transport corps for years before the war started, shuttling between Air Force depots, and running to Alaska and the Canal Zone zone or less on schedule. Spare equipment, including a variety of parts and light equipment, and officers and troops were carried. Army also maintained a steamship service in the Pacific, which in itself is precedent enough for an air transport organization.

There is some consideration of assigning military transport planes for use only in cases of maneuvers or operations, leaving most supplies for civilian transport lines to carry. The airlines, however, and Army authority is said to agree, that commercial flying of supplies for the Air Force can be done at much less cost, allowing for a profit, than it can be done under the most careful military management.

Post-War ATC—Naturally the post-war size of the Air Transport Command will be coordinated with the size of the military establishment which Congress will decide on. The H. H. Woodrum committee is being set up in Congress for that purpose. At this time it can only plan alternatives, it cannot lay down any proposals. It sees the shape of the peace to come.

In the Air Force there is an unpublished unit called Post-War Division of the Office of Assistant Chief of Air Staff on Plans. This group, headed by Col. R. C. Moffatt, is working on such problems as: What AAF commands will be needed in peacetime? What kinds of equipment? How shall pilots and air crewmen be drilled back

into civilian life for the best interests of the Army, the aviation industry, and the public? This plans division doesn't know any answers as yet. When it does, it can only recommend. Undoubtedly it will have something to say concerning ATC.

Canadian-Vickers

Turning out DC-4's

Douglas plane manufactured under agreement with U. S.

Disclosure that Douglas DC-4 transporters will be manufactured in Canada under an agreement approved by the War, Navy and State Dept., was followed by an announcement that manufacture of the plane has already started at a government-owned plant operated at Montreal by Canadian-Vickers Co.

Manufacturing rights for the Douglas craft were obtained as a post-war project and the Canadian-Vickers Co., designated under terms of the agreement, which gives Canada exclusive, but non-competitive, right to build the big four-engine plane and sell them to operators in Canada.

Curbs Competition—The agreement guards against possible competition with American airlines and aircraft works John M. Rogers, Douglas vice-president, and that under no circumstances is the Canadian government permitted to deliver or use Douglas equipment manufactured in that country prior to the time the company in the United States is ready to deliver commercial DCs transport to United States airline operators.

Four Other Types—In addition to the DC-4 Canada has four other types of post-war aircraft proposed or already in production. Canada will continue production of the Canadian-designed engine—Woodward Hydromatic (HWH) transport, made in Montreal, and has plans for two other transports of small and medium types. The Dornier is also "interested" in a trans-Atlantic type of transport which combines Canadian and British design. The design on this plane is well advanced, according to H. J. Symington, president of Trans-Canada Air Lines.

The Canadian government also plans production of jet propulsion aircraft and has been associated in the development of jet propulsion engines for the past two years.



CEILING PROJECTOR:

This beam, shot from a 16-inch searchlight, seeks out the location of cloud layers, which the observer remembers into ceiling height and passes on to the pilot approaching for a landing. This five-mile-long beam shines here at the Cleveland Lighting Division of Westinghouse, in helping to overcome flying hazards for airman of home and in battle areas.

CAB Urges Simpler Certificate Rules

Stringent regulations on private pilot certificates has been suggested in a memorandum and aviation circles by the Safety Bureau of the Civil Aeronautics Board. The action followed national distribution for comment on many proposals for simplification dealing with air traffic rules.

Repeals are sought by June 1 on the Part 20 revisions, which include reduction of the age limit to 16 from 18, increase in dual requirements and decrease in solo requirements; elimination of all but elementary navigation and meteorology requirements, easing of educational and physical examination regulations, and modifications of the private pilot flight test.

New Certificate System—The present system certificate would be dropped and a pilot certificate substituted, showing designation as private or commercial pilot. Jesse L. Lusk, director of the Bureau of the Bureau would circulate modification of several items in Part 69 on which a difference of opinion was shown by comment of air experts.

Future of Gliders In Post-War Upheld

Lauser-Kaufmann official says advantages will prove commercially feasible.

Admitting the glider industry has some problems to overcome, M. Nanan Whitehead, vice-president of Lauser-Kaufmann Aircraft Corp., contends the commercial and sports future of powered flight is promising.

Although the details of glider development cannot be released now because of war restrictions, Whitehead feels the military cargo glider can be converted to commercial operations, and that its payload can be increased simply by eliminating military equipment. The speaker's opinion were given in an address before the National Aeronautics Association Conference at Minneapolis.

Cost Reduced—"The wing cargo gliders, only the carrier will be needed for loading and unloading," said Whitehead. "In the meantime, the towplane is working elsewhere."

"We can safely estimate that a cargo glider manufactured under peacetime conditions will cost a fourth, or perhaps even a third less than a powered ship of the same capacity."

The use of gliders for transport loads also is usually the cargo carried. It eliminates the hazards completely. This feature coupled with the ability to descend at a remarkably steep angle of glide without building up excess speed means proper use of gliders is recovered about 150 percent, even under crash conditions.

Pack-up and Delivery—"We look to see the day when our gliders will make possible pack-up and delivery service," said Whitehead. "We hope to see the comfort and safety of glider travel proved within the next few years."

Whitehead says the industry is contacting airline officials, and is doing research work in this field. He believes gliders in tow will have important advantages in airline competition with railroads, steamships, and even trucking lines, as a means of saving costs. Incidentally, he said today's glider is capable of carrying a 10 percent greater payload than a powered plane of comparable size.



NAVY AIRMEN MELT SNOW OFF WALK AT AMCHITKA:

Employing an oxygen-like device known as an airplane engine warmer, these Navy fliers, were able to clear the snow off their boots faster.

Survey Shows Slim Light Plane Market

Texas University instructor urges development of mass outlet for post-war piston aircraft.

The light plane market faces heavy going in the post-war period, perhaps as heavy as that confronting heavy plane builders, concludes Dr. John H. Frederick of the University of Texas, after a survey for light plane manufacturers.

He sold a group of Austin, Tex., business men that the market for light planes probably will be comparable with that for motor boats. "Light Plane Market—'Thinks the light plane field can find a mass market,'" asserted Dr. Frederick, who is a professor of transportation and industry, "it will be fortunate to receive being written off of the heavy plane manufacturer will be written off, and just now I do not see such a mass market."

He said the average period of plane ownership before the war was less than four years, and that only 15 percent of the flying clubs obtained certificates. Among post-war market factors he cited seasonally peaked ground service, distribution and delivery systems to promote plane markets, and courses of instruction at reasonable cost and without interference with working hours.

Canadian Car Maps Post-War Program

A postwar production committee has been set up by Canadian Car and Foundry Co., Ltd., Montreal, together with plans for long-range employment involving unassessed products.

The greater part of the company's wartime operations last year were in aircraft and, while definite plans have not been announced, there are strong indications that Canadian Car will be an important factor in post-war aircraft production.

Albert S. Bailett, vice president, disclosed that the company's postwar production committee has directed a large staff of specialists in an intensive review of potential markets in Canada and abroad for products best suited to equipment.

He added that decisions reached up to this time promise a continuation of large-scale employment

with a minimum of operational let-down for retreating and change-over.

The company now makes Curtiss biplanes for the United States Navy, twin-engine Anson trainers, has recently completed a large order of Hawker Hurricanes and is making progress as well as carrying on considerable overhaul and repair work on aircraft.

Dodge Speeds Output Of 2,200 Hp. Wrights

With employment at 90 percent of the goal for this year, the Dodge Chicago Plant of Chrysler Corp., has gone into production and is "now producing and shipping in substantial and increasing quantities 2,200 hp. Wright air-cooled engines," Chrysler's President K. E. Keller reports.

Described as the largest airplane engine plant in the world, the 280-acre operation reportedly has had some difficulty in obtaining sufficient trained employees in addition to the normal troubles of getting a plant of that size and an engine of that complexity into operation.

Quantity Production—Keller's statement, made to directors, at the first announcement that the plant had gone into quantity production. The sprawling factory cost well over \$100,000,000, and one of its 19 buildings contains more floor space than the whole Pentagon building in Washington. Willow Run, Ford's great bomber plant, could be set down inside the Dodge plant. With more in spare, it was said, Dodge's engine plant, the plant was in production two years after ground was broken.

Chance Vought Joins AWPC

Chance Vought Division, United Aircraft Corp., became a member of the Aircraft War Production Council, East Coast, at a Council meeting last week in Atlanta. Rex Bevel was named to represent the company on the council board.

Grumman and Brewster are the only major aircraft companies not members of the Council. The Council board discussed plans for hiring new recruits in conjunction with the later Selective Service regulations and also laid plans for the meeting of the National Aircraft War Production Council in Los Angeles April 24.

Personal Aircraft Group Lists Aims

Committee spokesman urges establishment of thousands of landing areas, curb on regulations and education in light plane use.

Establishment of thousands of landing areas throughout the country, less restriction on private aircraft regulations on private flying and education of the public in the use of light airplanes were presented by James Welch, staff assistant, Council spokesman, at the group's opening objective of the Personal Aircraft Committee of the Aeronautical Chamber of Commerce. Mr. Welch spoke last week as behalf of the Committee before the Senate subcommittee on Small Aircraft at Minneapolis.

Small aircraft will be needed everywhere, the speaker said, like roads and highways. These fields should be owned by individuals and not by the government. "We need small courses, meetings—wherever people gather. They will be needed especially near homes and places of business. Elaborate airports are necessary for scheduled operations, but emergency necessity will have to use small fields."

Violent Circle—Some persons will suggest that the small field program be put off until there is actual need for it, Mr. Welch suggested that the vicious circle should be broken now, that development of personal flying will follow, as restoring followed building of road. "The development of road fields will increase the community, he said, and especially home-owning men and women of the services."

Ask Curb on Regulation—Other industry officials responsible for public safety with minimum regulations, and aircraft producers, in Mr. Welch's opinion, should be able to keep regulations at an "essential minimum" and can be done, he believed, by allowing the industry to accept part of the responsibility for safety.

Urges Conservative View—He said the light plane industry should be less its relations with the public, he conservative clause. There should be a wide range of design for farmers, urbanites, seafarers. The most difficult competition will not be between makes of planes but between aircraft and other, more conservative, means. The light plane must be sold in terms of its utility, it must be taken out of the luxury category.

Stress Competition In Air Policy Stand

Committee's clarification of earlier declaration is easily repeated as five-point program.

"Clarification" by the Aeronautical Chamber for United States Air Policy of its earlier declaration of its desires in post-war international aviation was in fact more of an expansion of its original five points, with the emphasis on competition.

The recent statement was issued at the start the committee's opposition to the "closed instrument" idea proposed in Senator McCarran's proposed revision of the Civil Aeronautics Act. The term "closed instrument" is simply another name for monopoly, and the committee.

"The terms are synonymous" This was followed by reaffirmation of the belief of the 17 members of the committee in their ability to compete successfully against "closed instruments" of other nations.

Other Factors Revealed—Elaboration of the stand taken last July put no paper around angles that have been the subject of controversy as the committee's viewpoint, but had not been expressed officially before. The new statement was issued by Chairman S. J. Solomon after a directors' meeting.

In it the 17 members of the committee's policy—American Export was the latest to join—stated that not all of them may be credited to its views, and recognized that the international field may require regional division of their efforts if economic operation is to ensure on a competitive basis. Regulated competition, they explained, offers opportunity to more than one airline in this field, "but only those lines should be certificated for operation in any one route as the public interest, the traffic potential, the postal service and national security may require."

Oliver Branch—The committee established a small olive branch to Pan American Airways which, with United Air Lines, has declined to sign the statement of policy, giving assurance of support of "the right of Pan American Airways or other certificated American flag airlines to carry on their own trans-oceanic operations in separate trans-oceanic routes, where adjudged by proper authorities to be in the public interest, to expand those operations." This, however, did not alter the committee's stand against the the-

ory of Pan American and United that one American flag line, though perhaps with all United States air carriers in an abundance, should be the country's agent in the post-war international air transport field against the expected single line competition from other nations.

Open Principles Favored—McCarran's Bill, the committee declared, would destroy the principles on which the nation's air transport system is based—"The international American policy of competition, including competition by appropriate government agencies."

The 17 airlines, pointing out that the war had proved their ability to fly "anywhere in the world," contended that there is no more reason to adopt the proposed monopoly or closed instrument theory of any other nation than to adopt its form of government or other internal policy.

Regulated Competition—Free and open competition, worldwide but subject to reasonable government regulation was the first point in the committee's original statement. They called for private ownership and management, for government-aided and world-wide air transportation system, worldwide freedom of transit in peaceful flight, and acquisition of civil and commercial outlets required in the public interest.

Pan American observed the same advice after the committee's latest statement as earlier, when American Airlines and American Export announced their proposed merger.

Committee Votes CPT Extension

Senate Commerce Committee approved Sen. Pat McCarran's bill extending the Civilian Pilot Training program beyond its June 30 expiration date. A qualifying amendment would limit annual appropriation for the program to \$10,000,000. The current fiscal year appropriation was \$38,488,000, although with added Army and Navy funds the program is scheduled to cost \$90,000,000.

McCarran explained that the bill would provide for training civilians in cooperation with educational institutions separate from the Army and Navy training programs. He said the program to reduce training would be citizens not subject to military training—17 to 18 year olds, women, and men not acceptable to the armed services.

Goodyear Hits Peak In Corsair Output

Goodyear production of the Navy's Corsair fighter was in full stride at the end of March. W. L. Lockfield, chairman of the board, told stockholders at the annual meeting in Akron last week. Employment at the aircraft subsidiary plants at Akron and Lorainfield Park, Akron, became stabilized at 35,000, he revealed, while production of wings for the Martin Marauder and subassemblies for other planes, was continued at a high level.

Trans-Canada Plans Toronto-Yukon Line

Trans-Canada Air Lines, government-owned trans-continental air service, plans a new route from Toronto to Alaska and the Yukon and for post-war purposes has surveyed routes it plans to fly to the West Indies and South America, according to the annual report of TCA issued in the House of Commons at Ottawa by E. J. Springston, president.

The new route north will run from Toronto via Saint Louis, Miami, Port Arthur, Winnipeg, Saskatoon, Whitehorse and Inuvik, he said, and will be operated as well as "ground and other facilities" can be installed. First section operated will be Winnipeg to Edmonton via Saskatoon.

International Routes—The report states that TCA and the Canadian government are making intensive plans for international air routes to be operated by the publicly owned system which Ottawa has announced will have exclusive franchise for international Canadian airlines, and points out that TCA already has surveyed routes to the West Indies and South America.

Other new routes contemplated when the necessary facilities can be provided are from St. John, N. H., to Halifax and Sydney, and from Ottawa via North Bay to Saint John, to regulate or supplement the present route to the northern Ontario via Kapuskasing and Aurora.

Business Volume Up—The 1943 report shows a big upturn over 1942 in business volume, with increases of 34 percent in passenger traffic, 126 in air express, and 51 in mail. Operating revenues were \$9,379,001, or \$2,942,153 above 1942.

COMMENTARY

Pacific Air Campaign Capitalizing on Teamwork Tested in Libya

400- to 500-mile strides against enemy effected through preliminary softening-up operations before follow-up attacks by carrier-based planes and invasion forces.

The spectacular success of the central Pacific air offensive has not only advanced the timetable by several months, but has indicated that from now on important operations against the Japanese aggressor will go forward without regard to the campaign in Europe. In this offensive, all elements of an American land-sea-air team have turned in a brilliant record of cooperation and laid down a pattern of more important operations which lie ahead.

Land-based aircraft of the Army Air Forces play an important part in the preliminary neutralizing of enemy air forces and preparing Jap-held islands for successful attacks by carrier-borne aircraft and Navy surface vessels, followed by amphibious assault operations by Marines and Army Ground Forces.

By capturing strategically placed islands and neutralizing others in the group, gigantic strides of 400-500 miles at a time are being taken, and the Japanese outer perimeter defense has already collapsed.

Land-Based Air Supports Navy—Is a theater in which vast water distances proved, all military operations are predominantly naval, supported and augmented by land-based aviation. Following the line of modern air power doctrine, Major Gen. Willis Hale's Seventh Air Force heavy bombers may be regarded as the Strategic Air Force, but medium, light and fighter-bombers coupled with Rear Admiral Marc A. ("Pete") Mitscher's carrier-based aircraft forms the Tactical Air Force, and Admiral Ray Spruance's Central Pacific invasion force (fleet and landing

Air War Glossary

Guide to air operations and air organizations, as provided by the European Theater of Operations command.

Flight—three or more aircraft, squadrons—two or more flights, group—three or more squadrons, wing—three or more groups, division—comparative unit, depending on number of wings available for assignment, air force—unlimited.

Mission—An ordered operation which may include one of many operations such as bombing, striking, dropping paratroopers, photographing, diversions intended to draw the enemy away from the main target, etc.

Sortie—A single aircraft accomplishment when, on an ordered operation or mission, it enters an area in which the enemy's defense ordinarily is active or a mission on which the aircraft is subject to enemy attack.

forces) make up the surface units with which it cooperates. Thus the pattern of victory first worked out in the desert of Libya has a well-watered counterpart.

Strategic air power strikes supply lines, creates an aerial blockade, and isolates the battle-field. Tactical air power (in this case heavily assisted by Naval shelling) knocks out the defenses and cooperates in the landing operations. The enemy base captured, unaided landing forces soon have extended airfields ready for the next long-range operation on the road to Tokyo. When bases are near enough to attempt it, direct bombardment of Japan will give land-based strategic air power a new and exciting role.

Airway's Over-Water Air Force—Plans for the Central Pacific air offensive were studied into high gear last summer. Admiral Nimitz gathered together a Naval task force of tremendous striking power—carriers, cruisers, destroyers, with floating bases for carrying supplies to meet every need, giving the fleet a much greater operating radius. The Seventh Air Force provided the striking arm of land-based aircraft for the task force.

Ever since the decisive battle of Midway, the crews of the Seventh, based at Hickam Field, carried out a series of long-range over-water missions averaging 2,500 miles



"THROUGH THE WORLD'S dirtiest WEATHER . . ."

This is the Burma Road of the air! It handles the Unabomber. It runs through the world's worst weather. Yet, over it, on a day and night shuttle service, Curtiss C-46 Commandos carry to China a greater weight of supplies than ever wound their way up the old Burma Road.

Here winds roar, clouds are low and "stuffed with water", fields "soak us" with no more, King albatross vultures as much as 3000 feet in a day, instrument flying is the rule, oxygen is always required. Jap fighters guard the fog and "vape" headhunters wait below.

Through this maelstrom, Curtiss Commandos log tons of vital cargo. Many of them have accumulated hundreds of hours of flight time with little maintenance other than that offered by the crude facilities of temporary bases. These planes have proved their merit under the toughest conditions known to flight. They'll prove it again when they make their bid as peace-time transports and air cargo carriers. Curtiss-Wright Corporation, Airplane Division, Buffalo, St. Louis, Columbus, Louisville.



RAF'S NEW SIX-TON BOMB

First close-up picture of the new 12,000-pound bomb, which the Royal Air Force is dropping on Main-occupied Europe every night, is shown here in comparison with the smaller bombs. The new 12,000 pounder has been used with devastating effect on industrial plants working for the enemy.



NEW IMPROVEMENTS FOR THE MITCHELL:

The North American B-25C Mitchell, shown here, is being equipped with an improved 15-mm cannon, specially designed for aircraft and several hundred pounds lighter, with a new mechanism making recoil hardly noticeable, according to *Navigator*, AVIATION NEWS correspondent.

round trip, with post-point bombing and post-point navigation at a premium. In March, 1943, units of the Seventh moved into Funafuti, target of the Ellice Islands, about 2,500 miles from Hawaii and about 1,800 miles due east of Guadalcanal.

Gilbert Operations—The joint operations against the Gilberts began in September, with air attacks against such targets as Makin and Tarawa. Within a few weeks the Seventh started its amazing climb up the ladder of the South Central Pacific island bases. Funafuti to Nukunono (150 miles), to Tarawa (350), to Makin (100), to the Gilberts, to Kwajalein (300) and Eniwetok (400) in the Marshalls. Putting it another way, the Seventh Air Force began its bombing of enemy bases in the Gilberts Nov. 13 from its bases in the Ellice Islands some 4,000 miles from Tokyo. Twelve weeks later its most advanced base in the Marshalls (Eniwetok) was about 2,500 miles from Tokyo. Here is a gain of 1,500 miles, an average of over 17 miles per day. And this is just a beginning.

Already the important supporting bases to the east of strategically placed Truk, including Kusaie (400 miles S.W. of Kwajalein) and Pohnpei (500 miles S.W. of Eniwetok) have been heavily bombed by Liberators with a view to their neutralization. Subsequent attacks by the Seventh Air Force and by Fleet Air Wing Two were made on the enemy bases in the eastern

Marshalls which were by-passed in the surprise attack on Kwajalein some weeks ago. These include Jalut, Mille (Mik), Taka (on Makin), and Wake.

The Flying 75—The adaptation of the 75 mm cannon in the Mitchell medium bomber (B-25C) to the requirements of the Central Pacific theater was an interesting aspect of the Marshall campaign. This fast-firing heavy cannon proved to be a highly formidable weapon with a surprising degree of accuracy. It was effective against shipping, but was particularly useful in neutralizing Jap anti-air and fire from automatic weapons which had previously taken a heavy toll of the Mitchells in their numerous altitude attacks against Jap island installations.

With the flying cannon, the B-25s were able to drive the Jap gun crews from their weapons, and frequently to destroy the weapons themselves. Ten or more shells could be fired by each bomber in the approach to the target. In the new attack model of the B-25, the cannon is especially designed for aircraft, being several hundred pounds lighter, with a new mechanism which makes the recoil hardly noticeable, the two forward-firing 50 caliber guns in the nose have been increased to four, with a set of two package guns on each side of the forward fuselage. Two more 30s in the top turret, two in a tail turret, and one waist gun on each side of the fuselage complete a terrific fire power of fourteen

30s, plus the 75 mm cannon. A ton or more of bombs makes this new Mitchell, now in the Pacific and other theaters, a more customer.

Other Members of the Team—None the less valuable is the far-ranging Liberator, long arm of the Seventh's striking force, and in a different way the accurate-biting *Jevelines*. A-24B, dive-bomber, Army equivalent of the improved Navy SBD-3. Fighters on the team for defense of newly acquired bases include the newest Warhawk (P-40N) and *Arrowheads* (P-50C), both used for short range work as sturdy fighter-bombers. Navy Liberators (PB4Y) and Ventura (PV-1), Hellcats (SR-6C) and Avengers (VSF), Corsairs (P4U-1) and Hellcats (P-60) complete the picture.

No wonder Jap airpower is melting away in the Central Pacific. We will catch up with it, sometimes, sometimes, and tough fights are ahead, but the final outcome is sure.

NAVIGATOR

AAF Surgeon Lauds Air Ambulance Role

Air evacuation of sick and wounded service men is placed in a group with the muffs, drags and blood plasma as one of the three greatest life-saving measures of modern military medicine by Maj. Gen. David N. W. Grant, Air Surgeon, in a report to Gen. Arnold. General Grant reported that 173,327 patients—sick and wounded of United States and Allied forces—were evacuated by aircraft during 1943. The figure refers to patients admitted to a medical service and therefore includes not only non-battle casualties, but also patients air-evacuated more than once from one hospital to another.

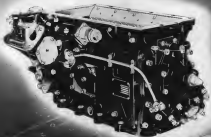
Evacuated to U. S.—Of the total evacuated from theaters of operations into the United States aboard Air Transport Command planes, 70,935 were from New Guinea, 24,767 from the Solomon Islands, 36,479 from Tunisia, Sicily, Italy.

The report said that in the Mediterranean area, evacuated patients were flown a total of 16,001,366 miles and 131,762 hours. The average flight was 263 miles and the average flying time 2.2 hours. Out of the Solomon, the route was more than 1,600 miles and flying time ranged 4 1/2 to 7 1/2 hours.

Evacuations in the New Guinea theater involved shorter flights for the most part.

TOMORROW'S STRIKING FORCE

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S.A.

CECO

PERSONNEL

Jack Hight has become acting director of public relations for Bell Aircraft Corp.'s Niagara Frontier Division, succeeding **Wes Swann**, who has joined the U. S. Army. **Stephen K. Fitzgerald** continues as public relations director for the corporation. Hight has been with Bell since 1941.

Capt. Ralph Ridenbaker will receive the degree of Doctor of Science at Westminster College's commencement May 20.

William Sebek (photo) has announced his retirement from the technical data laboratory of the Materiel Command at Wright Field. An early flyer and veteran mechanic and craftsman of the AAF with continuous service dating back to 1917, he was presented with a scroll signed by officers and civilians of the technical data laboratory, headed by **Gen. Col. J. M. Hermark**, at a luncheon in his honor. He began his connection with the AAF as an area technician with the first area squadron at old **Wheeler Wright Field**, now **Patterson Field**, near Dayton. He has since been associated with technical data and maintenance exhibits at Wright Field, having done most of the work on a replica of the used Wright design.

Capt. Aubrey D. Dard has been named chief pilot of the Atlantic Division of the American Airways, succeeding **Capt. Harold E. Gray**, division manager of operations. Dard has flown for Pan-American since 1939 and joined the trans-Atlantic operation in 1939, after having flown PAA's routes between Mexico and Central America.

Capt. Felix E. Sump and **Capt. Alfred M. Pielke**, who were among the officers at the Navy's awards, have been nominated rear admirals.

Fluel M. Williams has been appointed to the cargo traffic department of American Airlines, Inc. He is a former executive of the Post Office De-

partment in Washington. He will be general superintendent of aircraft traffic and will conduct research in all phases of post-war aircraft handling.

Mr. Alexander P. Deleander was guest speaker at the open meeting of the North Texas chapter of the American Society of Tool Engineers in Fort Worth.

Blaise H. White has been appointed general manager of U. S. Rubber Co.'s fuel cell division, which is responsible for large volume production of synthetic fuel cells, portable synthetic rubber gasoline tanks, and other important war products.

Frederic A. Lewis is the new district traffic manager for Continental Air Lines in Kansas City. He was previously at Albuquerque.

Col. Gen. Ray G. Hems (photo) has been appointed chief of the AAF Materiel Command's inspection division, with headquarters at Wright Field. He is the first general officer to hold such a post and succeeds **Col. George W. Falk**, who has received an overseas assignment. **Gen. Harsh** was formerly supervisor of the maintenance procurement district of the Materiel Command at Wichita, and has served in numerous aviation plants as AAF training representative. Growth of the aviation industry design and quantity, emphasis

and test engineering. At the same time, **Hemshorn** announced that **Col. D. Winby**, aircraft equipment engineer, will replace **Charles**.

Howard F. Maguire, Jr. has been appointed superintendent of the Douglas Aircraft Co.'s industrial and public relations division at Tulsa.

Robert Van Bascobben (photo) is Western Air Lines' newly appointed District Traffic Manager in San Diego, replacing **Ray Bushman**, who has been assigned to Western's general traffic office in Los Angeles. Prior to joining W. A. L., last October, **Van Bascobben** was a Union Pacific railroad traffic representative.



AWARD FOR BURMA WORK
May Gen. Walter M. Frank, commanding general of the Air Service Command, Patterson Field, Ohio, won the Legion of Merit on the basis of **Col. John de Histo**, new chief of the studies and construction section, ASC headquarters, for his work in India division.

used during the earlier stages of war production, are now being equaled by maintenance and a close check on quality of production.

Signard A. Conners, chief equipment engineer at Hamilton Standard Propellers, United Aircraft Corp., has become staff assistant to the factory manager, coordinating all equipment



Cannons **Bethley**

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1 December, 1917, when **Wm. E. Lester** was test pilot for Fairchild, sponsored its transport companies operated throughout the country. By 1921, American Airlines had taken over the operation of a number of these lines, and material progress made by American all the way to Los Angeles. But Lester abandoned from trying to become capital in American's commercial career.



3 January, 1927—American Airlines recalled the first Link Traveler in Chicago. **Harry H. Smith**, now Vice President, noted. The Link Traveler made the pilot as break up on the radio signals and burst of another track to perfect technique in approaching the airport by experiment. But Lester became Link, Insurance, then Chief Executive, Pilot School.



5 Today, American Airlines is operating over routes stretching 5,634 miles. In seven hours, for the Air Transport Company, reach in the four corners of the world, with 133 trans-Atlantic crossings weekly. Seven thousand employees keep the "Flagship" flying and are making a major contribution toward winning the war.



2 1931—Go-Pole Lester, sponsored an important his staff, "the" one of the first models of the Link Traveler when it was used before a common crowd in the old Nevada August, May 16, 1934. American Airlines began American Airlines, for Lester continued with the company as a full-fledged pilot. He became American's flight superintendent at Chicago in September, 1936.



4 December 31, 1939 The United States declared war on Germany and Japan. Shortly after, American Airlines started over almost half as much for "the" ship. To the Government for was service in the aviation phase, American started recruiting numbers of passengers as emergency workers, military personnel and cargo capacity needed in the war.



6 American Airlines has given insurance flying insurance more than 1,000 in an area. In the Link Traveler, all American pilots are required to take Link Traveler certificate courses, even military pilots like **Col. J. J. Goetzgott**, pictured above.



7 Now in charge of piloting, **Capt. Lester** is married to former American aviator, **Shirley Brooks**, a present supervisor of American Airlines for the company. Lester says, Link Traveling has nearly doubled the air transport capacity of American Airlines, with undiminished safety, under rigorous war-time conditions. LAA is proud to have a part in the great job being done by American Airlines. Link Aviation Division, Inc., Wing Houston, New York, Link Manufacturing Company, Inc., Greenough, Ontario, Link Travelers, Aviation Services, and other products contributing to the safety of flight.

Air Power

Through Piston Rings

McQUAY-NORRIS ALUTINIZED PISTON RINGS

PISTONS...PINS... HARDENED AND GROUND PARTS

McQuay-Norris is definitely air-minded. We are now suppliers of precision parts to the world's largest makers of aircraft motors. Our 34 years' experience in precision manufacture enables us to meet every demand of modern aviation for sturdy, unfailing precision parts. Your inquiries are invited.



PARTS FOR AIRCRAFT ENGINES

Piston Rings
Oil Sealing Rings
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Machined Aluminum Pistons
Piston Pins
Counterweight Chuck Pins
Machined Magnesium Parts
Cylinder Head Down Nuts
Harden and Ground Parts

PARTS FOR PROPELLER ASSEMBLY

Machined Magnesium Parts
Piston Rings

EQUIPMENT FOR MAINTENANCE OF AIRCRAFT

Pistons for Oxygen
Compressor
Piston Rings for Oxygen
Compressor
Pins for Oxygen Compressor
Pistons for Air Compressor
Pins for Air Compressor
Piston Rings for Air
Compressor

LANDING GEAR PARTS

Machined Aluminum Pistons
Piston Rings
Harden and Ground Parts



McQUAY-NORRIS MFG. CO. (AIRCRAFT DIVISION), ST. LOUIS, U.S.A.

CANADIAN PLANT, TORONTO, ONTARIO

K. L. Vase, until recently assistant to the traffic manager of the Aeronautical Chamber of Commerce in Washington, has been appointed traffic superintendent of Consolidated Vulture Aircraft Corp., Vulture Field Division at Dover, Calif. Vase has been on leave from Consolidated to the Chamber. He had been assistant traffic manager at Vulture Field.

Edward J. O'Brien has been appointed district traffic manager at Phoenix for Transcontinental and Western Air, Inc.

Two new appointments at the new Chicago C-46 plant have been announced by Douglas Aircraft Co. Edward G. Olson (left), has been named



assistant superintendent of assembly. He was formerly general supervisor of installation sections. E. N. Clausen, Jr. (right) has been appointed assembly superintendent of labor room. Clausen has been with Douglas for 15 years and before his present position was general superintendent of the process section. At the start of war he was made supervisor of all aircraft workrooms, camouflage and exterior markings.

Lawson Brown has been named chairman of the executive committee of the board of directors of Pratt-



BROWN



PAW CHIEF GETS L.L.D.

John Trippie, Paw American president since after he received an honorary Doctor of Laws degree from University of California, congratulating him is Sam Judd, of Paw American.

via-Corbin Airlines. Brown, president of North Machine Co., has been a PCA director since 1935. He succeeded the late George T. Ladd as chairman. Brown is also a director of Fidelity Trust Co., at Pittsburgh.



REA ISSUES NEW BOOK:

An Express dossier of Railway Express Agency has issued a new 34-page booklet, *Vision Unlimited*, covering the growth of air cargo. Looking it over here are P. M. Channing (right), air traffic executive, and R. G. McGinn, public relations superintendent, REA.

Conde Sherman W. Bann, L.R.N., has reported for duty to the Aeronautics Service, Flight Division of the Navy Dept. under the deputy chief of Naval Operations for Air. He will serve under Comdr. H. T. Greville.

TELLING THE WORLD

Louis C. Bousherry, of Hill and Knowlton's New York office, has been assigned to the Altonville division of Consolidated Vulture as resident manager of public relations. He succeeds J. Clark Bennett, assigned to public relations for the Aeronautical Chamber of Commerce, in Washington. Before joining Hill and Knowlton a year ago, Bousherry did public relations for the American Red Cross, Western Union Telegraph Co., and Mackay-King Mills in New York.

Baig Co., national advertising director for Douglas Aircraft, has opened an office in Chicago.

Pier Aircraft Corp. has appointed Albert Kimball Co. as its agency for radio and public relations.

Whitney House is cooperating with the Navy's Public Relations Office and the Coast Guard in the publication of *Lost Mail Miller's Daybook for Our Carrier*. The book describes life aboard an aircraft carrier and will be illustrated with 300 official Navy photographs taken by Lt. Charles E. Kevins. Lt. Miller is the author of *I Cover the Waterfront* and is stationed in Public Relations, Magazine Section, at Navy.

Westwood Co., Cleveland, has announced through Gene P. Roberts, advertising director, that all six of the company's campaigns for 1944 will be placed through Hays, Inc., New York. Hill and Knowlton have been appointed publicity and public relations counsel for the company. Publications advertising transactions 46 magazines in the general and trade paper fields, and 13 newspapers in 15 metropolitan centers.

Douglas Wood Gibson, publicity, advertising, fiction, radio and film continuity writer and editor whose experience includes publicity for American Airlines, has joined the radio department of N. W. Ayer and Sons, Inc.

Bell Syndicate has for release, in serial form, *A Ship to Remember*, the story of the carrier *Barnet*, written as a novel by Charles Spillings and Ellis Carver.

In a series of national advertisements, Bessett is outlining its plans for national and international expansion. Road applications pending before Civil are explained and maps illustrate the existing and proposed routes of the carrier. Foreign expansion is to be undertaken with Trans-Atlantic, South American and European routes.

The TWA Advanced Technical Training School at Kansas City has closed, but training is continuing under the Army of Bombers Field, Mo.

ACCA Clarifies Industry's Stand On Cost-Plus Plane Contracts

Aeronautical Chamber in statement urges continuance of system in view of unusual success in meeting production quotas.

The aircraft industry's stand on cost-plus-fixed-fee contracts is presented in a statement by the Aeronautical Chamber of Commerce, trade association of the industry, which urges continuance of this type of contract.

It is made clear that the aircraft manufacturers face a post-war period which will be highly competitive and it is not believed that they are short-sighted enough to permit their organizations to operate on anything but the most efficient basis possible in order that their organization may be in the best position to meet post-war conditions.

Emergency.—The detailed statement, submitted to the War Contracts Subcommittee of the Senate Military Affairs Committee, points out that the industry was called on to produce planes at a rate which was far in excess of facilities at the outset of the war production program and that the emergency could not await negotiation of fixed-price contracts designed to cover all

contingencies that might arise.

It points out further that, under cost-plus-fixed-fee contracts, the industry has met production goals set by the armed services and has produced under this form the finest military aircraft in the world.

Only Practical Means.—The Chamber holds with Under-Secretary of War Patterson that, in the early days of hostilities, "fixed-fee contracting was the only practical means to obtain maximum benefits from the small nucleus which then constituted the aircraft industry."

"Without this type of contract," Patterson added, "the aircraft industry would have been utterly unable to meet the huge demands for airplanes, engines and propellers and their components."

The Chamber adds that "we believe that the form of contract, such as cost-plus-fixed-fee, cost-plus-incentive-fee, or fixed-price, is not so important as the administration of those types of contracts

The same evils alleged to exist under cost-plus-fixed-fee contracts also may be alleged to exist under fixed-price contracts.

Basic Points.—Nine basic points are advanced in support of the position that cost-plus-fixed-fee contracts should be continued:

1. Length of time necessary to develop and negotiate an equitable fixed price would greatly delay the war program.

2. Unusually rapid technological advances of aeronautical sciences and reviews in tactical employment of aircraft require frequent changes of specifications.

3. There is difficulty in developing new models under fixed-price contracts, experience having proved that the cost of developing new models cannot be estimated with any degree of accuracy and also, the tendency has been toward larger airplanes so that substantial sums are involved.

4. Threat of inflation is involved, since ordinary contracts for a large number of airplanes require months and even years for their complete performance.

5. Uncertainty as to availability of materials, distribution of which is controlled and determined by government.

6. Uncertainty of availability of manpower, unpredictable fluctuations of which could increase costs substantially by prolonging the period of performance.

7. Inadequacy of working capital prevalent in the aircraft industry in relation to volume of business called for under aircraft war production contracts.

8. Termination risks under fixed-price contracts on the ground that the cost-plus-fixed-fee type is much more desirable because of the present uncertainty that surrounds the procedure for the fixed-price contract.

9. Efficient operation under cost-plus-fixed-fee contracts.

The statement conceded that perhaps it was true that, before the renegotiation law, the fixed-price contract did have a greater incentive than the fixed-fee contractor to reduce cost because he was permitted to retain the entire difference between his selling price and the cost of operation, but emphasized that under the renegotiation statute, this is no longer true. Statement in Congress on elimination of cost-plus-fixed-fee is still mixed and the final answer is not yet apparent, but it is apparent that the industry has presented a case which cannot be ignored.

Dust

IS CONTROLLED QUICKLY AND EFFECTIVELY
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Why Gulf Sani-Soil-Set is the practical answer to YOUR dust-annoyance problems:

Highly Effective.—Gulf Sani-Soil-Set completely eliminates dust annoyance immediately after application. No long waiting periods are necessary before the ground is ready for use. The dust abating effect is accomplished by the action of the compound in adhering to and weighing down dust particles. In addition, Gulf Sani-Soil-Set possesses valuable germicidal properties.

Long lasting.—Because of its extremely low volatility and insolubility in water, Gulf Sani-Soil-Set remains effective for long periods. One application per season is usually sufficient.

Easily Applied.—Gulf Sani-Soil-Set is free-flowing, easy and pleasant to use. It can be applied by sprinkling can or spraying nozzle, and spreads quickly and uniformly.

Lower Maintenance Expense.—Gulf Sani-Soil-Set prevents the growth of grass on areas treated and reduces cleaning and dusting inside near-by buildings to a minimum.

Write today for the booklet giving complete information about this modern, proven dust abater!



mail this coupon today

Gulf Oil Corporation, Gulf Refining Company
Gulf Sani-Soil Building, P.O. Box 10
Please send me, without obligation, a copy of the booklet, "Gulf Sani-Soil Set—the solution for dust control on your lawn."
Name _____
Company _____
Title _____
Address _____



NEW BELL HELICOPTER:

One of the first sketches of the helicopter being perfected by Bell Aircraft Corp., a new model of which has been test flown. The craft is competitive in principle which gives it great stability in flight and has attracted favorable attention from engineers, according to the company.

37



A Kellert in operation with a "New Found Fly" doing gas and exercises.

Pioneer...Blazing Air Trails

PIONEERING is an American tradition. Every step in America's advance has been made because pioneer spirit and undaunted backslaps to such new paths—paths that encouraged others to take up the journey. The scene pictured above is just one of the many—many as the Kellert has made by rotary wing pioneers. The aircraft flying close to the tops was an early model, direct-control Kellert, demonstrating its ability to hover in a tight turn, and to take off or land on any open spot of pasture. Most of this Kellert pioneering was during the most severe depression

the U. S. and the world had ever experienced. It required faith to carry on with confidence in the goal ahead. Today, Kellert's expanding staff of engineers, backed by the fifteen years of churning new paths, looks forward to future—when developments in rotary wing aircraft will have opportunities to rise in the expanding and servicing of cross-country electric lines and oil pipe lines, in spraying and dusting agricultural crops, in reaching, forestry fire patrol—and many more ways. Kellert Aircraft Corporation, Upper Darby (Philadelphia), Pennsylvania.



Eight years ago a U.S. A.T. Kellert doing off from a line of the Operational Display, Wright Field, Dayton, O.

KELLETT

OLDEST ROTARY WING AIRCRAFT MANUFACTURING COMPANY

horsepower ratio, total engine horsepower and small frontal area and that it is distinctly ahead of all European liquid-cooled engines in these categories.

Wright Corrects

Wright Aeronautical Corp. reports that "Through a typographical error made in the statistical report on aircraft engine production, the figure reported on the total horsepower of Wright engines produced in the period between America's entry into World War II and Jan. 1, 1944, should have read 184,200,000." AVIATION NEWS, in its story on this production in the Mar. 27 issue, and the company's figure 184,399,999 on originally announced by Wright.

ACCA Backs NAA Private Flyer Plans

The need for coordinated assistance to private flyers will be met by the new program of the National Aeronautic Association, the Personal Aircraft Committee of the Aeronautical Chamber of Commerce states in endorsing the new NAA emphasis on service to the consumer.

"Changing the nature of its operations from that of sponsorship of general activity to direct service to the consumer supplements the operations of the manufacturers and fills a long-felt need," the committee said.

Stakes Begun—The NAA has begun studies of a service program for private flying after the war, to offer flight maps, routing service, airport directions and approved landing, repair and hotel facilities. Under the program, NAA will stress local chapter organization for overall cooperation in developing aviation.

Magnesium Group Formed in Chicago

Designed to assure the future of magnesium alloys and to foster development of fabrication techniques, industry members—producers and fabricators—have formed The Magnesium Association, with headquarters at 2327 West Taylor St., Chicago. One of the purposes will be to give members and the public authentic information on magnesium alloys.

Surplus Disposal Plan Held Stopgap

New York WPB-Aircraft launched program to reduce some stocks now.

A surplus distribution program, under way in New York and sponsored by nearby aircraft companies and WPB is merely a stopgap plan being utilized to reduce some surplus stocks pending institution of an over all program, industry sources reveal.

The New York program involves disposal of the Hotel McAlpin, and "on the spot" decisions on priorities and waiving of legislation orders by WPB representatives, so that portions of stocks usable in other industries will be moved from excess inventories of the manufacturers participating—Bell Aircraft, Eastern Aircraft division of General Motors, Glenn L. Martin Co., Republic Aviation Corp. and Eclipse-Powder division of Bendix Aviation Corp.

The display opened Mar. 27 and will continue through Apr. 8.

Sample Displays—On the West Coast, sample displays are being handled by the ANPC, but no concerted effort such as that in New York is being attempted.

But in the meantime, 600 manu-

facturers are being brought into the surplus inventory segregation plan under which physical separation of all surplus will be carried out and the plants relieved of the direct burden of the surplus. It has been estimated that the West Coast surplus total will run approximately \$50,000,000 and that the entire total will run substantially higher.

Complete Reports—Full and accurate reports are expected to be available by June. When a clear picture of the problem is available, an effort to move the goods in commercial channels will be made. By that time it is expected that definite "rules of the game" will be laid down, so that Congress, contract officers, WPB officials, prime contractors and subcontractors will know what can be done and what cannot be done without fear of contradictory orders and investigations.

The eastern manufacturers' display also is being shown in the hope that the companies indicate procedures that may be used to speed the materials redistribution and disposal problem. The industry has been warned that huge surplus stocks may prove the fatal bottleneck in termination procedures and that an effort must be made to meet the problem before large-scale contract terminations begin.



WINDOW PROTECTS GUNNERS:

New plastic sheet gas metallization, incorporated on all Boeing Flying Fortress now coming off the line, protects gunners from rays of high altitude weather. Most gun positions formerly were open to weather. Employees here are putting finishing touches on new metallization.

Split Thousandths



This is a story of production, a story which is more than merely adequately handling a difficult job. It's typical of broaching's part in precision production.

The part shown is a Steel Spur Terminal. The job—to make more parts per hour with less tolerance than was ever thought possible before the war. The answer—a 3L Horizontal Hydraulic Broaching Machine with special broach which with a special fixture made production and precision a matter of seconds rather than hours—a matter of split thousandths rather than thousandths.



The **LAPORTE** Machine Tool Company
HUDSON, MASSACHUSETTS U.S.A.

Canada Raises 1944 Plane Weight Quota

Tool for year also increased but emphasis is on tonnage rather than number, Howe indicates.

Canadian aircraft plants expect to produce 4,332 aircraft in 1944, according to C. D. Howe, Minister and Supply Minister. He admitted the figure was only slightly above last year's 4,122, but said more emphasis was being placed this year on combat types now and that the total weight of planes would be up substantially.

The percentage of aircraft produced in Canada last year was 20, 683,254, compared with an estimated 21,438,666 this year. Howe told Parliament at Ottawa that Lancaster bomber production is to be increased from the current nine planes a month to 17 by May and 30 a month by next December and that Mosquito bomber production will be increased from 12 planes a month to 22 by June.

► Mosquito Problems.—More problems have arisen with the production of the Mosquito bomber than of any other plane manufactured in Canada," Howe said. "I may tell the House that the British producers have experienced the same difficulties that have been met here." He did not elaborate.

To date, 162 Mosquitos have been built in Canadian plants, with highest production in February, when 35 were turned out.

Up to mid-March 36 Canadian-built Lancasters had been delivered, including two to Trans-Con-

ada Air Lines for its trans-Atlantic service.

Current production output is expected to reach 70 a month by mid-summer, as compared with the present 20 planes monthly, and to increase to 120 by the end of the year.

► Trainer Output.—Production of trainers in Canada, as in the United States, is on the decline. Cornell elementary trainer output is being reduced from the current 128 a month to 85, while two-place trainers from 70 to 39; Harvard secondary trainers will be continued in production at 130 a month until the year-end.

A table of number of aircraft and weight produced in Canada as given by Howe, follows:

Year	Number of aircraft	Production weight
1943	4,122	1,680,000
1944	4,332	1,700,000
1945	4,332	1,700,000
1946	4,332	1,700,000

Employment in Canada's aircraft industry has jumped from 1,066, when Canada went to war in September, 1939, to 132,000 today.

Bendix Salvage Plan

Segregation of metals by alloy types throughout all production stages contributes to the efficiency of the salvage program which recovers nearly 800 tons of scrap metals a month at Bendix Products Division of Bendix Aviation Corp. at South Bend.

Steel chips and shavings, classified in six different alloys, represent the biggest item in the plant's metal salvage program, according

to H. F. Bundy, salivage manager. Bendix Salvage-40 said that during an average month the plant salvages 100,000 pounds of cast iron, 150,000 pounds of aluminum in 11 different alloys, 35,000 pounds of magnesium in five alloys and 15,000 pounds of brass in three alloys.

In addition, the salvage program recovers each month 14 tons of paper, about 8,000 gallons of cutting oil and approximately 16 tons of such miscellaneous material as graphite, emery wheels, wooden kegs and barrels, barrel bags and wire and metal bandings.

Cross-Wind Landing Device Developed

Device that permits planes to land on cross-wind runways is being developed by the British, who now are using it on some small planes, the British Information Services have revealed.

Authorities in this country and each landing gear had been discussed but that the increased weight of any practical application had operated against development.

British say the gear, invented six years ago, has been undergoing intensive tests and now is used on the Avroport Oxford, a twin-engine advanced trainer, the Miles Magister, a two-place primary trainer, and other types.

The newly disclosed device is described as one that permits turning of the landing gear to runway direction while the ship is held into the wind.



PREDECESSOR OF FLYING FORTESS.

The Boeing GA-2 of 1922, which packed 37 gun cannons, 30 caliber machine guns, a brace of 20 caliber guns, an armored turret, and 1,500 pounds of armor plate. The cannon was mounted just above the landing gear spreader struts, had a field of fire 68 degrees from vertical. Two 30 caliber machine guns above

the cannon had a downward sweep to 68 degrees from vertical and 55 degrees from horizontal. The other 30 was carried in a rear turreted in fixed position, and operated by remote control by either the top (rear) gunner, or by the crewmember (lower position). Scarf-mounted Lewis guns completed the armament.

Vast Fruit, Vegetable Potential Discussed at Detroit Meeting

Total, according to Wayne University survey, ranges from six times all airborne express in 1941 at 15 cents per ton mile to 968 times 1941 total at a 3-cent rate.

By ALEXANDER McSUIRELY

Importance of the vast potential traffic available for air cargo in fresh fruits and vegetables was demonstrated and discussed in a comprehensive forum meeting at Detroit.

One of the speakers expressed belief that transport now flying can provide rates sufficiently attractive to carry approximately six times the total tonnage of 1941 air express, in fruit and vegetable cargo.

Primary purpose of the forum meeting was assessment of results of the first of a series of air transport studies by Wayne Uni-

versity, this one on the air cargo potential in fresh fruits and vegetables.

Findings—Main finding of the survey, conducted by Dr. Spencer Lucas, may be boiled down to the following paragraph:

"The potential air traffic in fresh fruits and vegetables alone, at 15 cents per ton-mile, is approximately 6 times the total of all airborne express in 1941. At a 3-cent rate, the potential is 15 times, at a 7-cent rate, 40 times, at a 3-cent rate, 200 times, and at a 3-cent rate the potential is actually 968 times the total air express volume of 1941."

Packaging Factor

Other factors besides rates must be taken into consideration by the shipper who plans to use air cargo, Chairman L. Welsh Pape, of the Civil Aeronautics Board, told the Detroit air cargo luncheon. Pape, who is moderator of the ongoing forum, said packaging could be lighter and hence less expensive.

Excessive handling can be eliminated and bruising and spoilage will be reduced through air shipment. Decreased risk and reduced time of coverage will lower insurance costs. Inventories can be reduced "when a consumer market is within hours rather than days or weeks of the wholesaler."

In addition to these money saving factors, Pape pointed to a classification of cargo as requirements, where a plant can save increased territory and transportation, when not required, may be avoided by nature. Approximately 61 of 100, 100,000, 30,000 or more less a total of 100,000, how cold you want the cargo to be."

Airline and manufacturer's representatives on the panel forum pointed out that existing airplanes are far from the efficiency necessary to make a three-cent ton-mile rate economically possible. However, William H. Goodrich, president of the Generalized-Vulcan Aircraft Corporation, Wayne, Mich., representing the manufacturer's viewpoint, asserted that "there is reason to believe several larger planes now flying can operate at 15 cents a ton mile." (He included in this category the C-54, Liberator Express, Constellation, and Curtiss Commando.) The Douglas DC-3, he said, was operating on a passenger basis at approximately 12 cents a ton mile, but some operators believed it could be operated for 21 cents a ton mile if used solely for cargo transportation.

Cargo Potential—The Wayne study showed that strawberries and tomatoes would be the only practical air cargo at the 15-cent rate. At 16 cents, these would be joined by peaches and beans, at 7 cents, by apples, cantaloupes, cherries, pineapples, plums, prunes, raspberries, avocados, lettuce, asparagus, cabbage, peas, spinach, corn, cucumbers, and radish. At 8 cents, the list would expand to include

pears, honeysuckles, tangerines, apricots, peas, celery, peaches, cauliflower, beans, lemons, brussels sprouts, radishes, shishito.

Volumes Traffic Urged—William Walker, New York City airport consultant, estimated that, at the 15-cent ton-mile rate, two air cargo planes a day would come into New York, but with volume available at 3 cents a ton-mile, 240 planes a day would land in New York airport bringing fresh fruits and vegetables. He suggested possibility of shipment of daily newspapers by air from the large cities to the southwest, as one means of providing a return flow of traffic. Essentially secondary airports for produce alone, may be established in the larger cities, he predicted.

Viewpoints of the producers and the produce merchant, anxious to take advantage of air shipment as soon as rates make it economically possible, were presented by Earl H. French, New York, national marketing director, Atlantic Commission Co. and by a spokesman for Austin Angus, manager of Texas Citrus and Vegetable Growers and Shippers Association.

Tests Asked—William Gault, executive vice-president of the United Fresh Fruit and Vegetable Association urged the start of actual practical flying tests with fruit and vegetable cargo.

Other speakers included L. Welsh Pape, CAB chairman, John B. Craze, chief of transportation unit, Commerce Dept., CAA Administrator Claude H. Brown, who emphasized the importance of community study on the future place of its airports; Rep. Louis C. Sabat, of the House Appropriations Committee; Dr. Walter R. Row, president, and Dr. David Hunt, vice-president, of Wayne University, and Col. Edward S. Rouse, president of Evans Products Co., who released the survey.

It was noted that in addition to bananas, oranges, grapefruit, lemons, fresh figs, avocados, asparagus, and sweet potatoes. More "durable" fruits and vegetables such as apples and peaches will not be served by air even at the 3-cent rate.

U. S. Study Made—Principal speaker at the luncheon before the forum Secretary of Agriculture Claude Wickard, reported findings of a supplemental study made by the Department of Agriculture with the University.

This study shows that tomatoes could be shipped post-war from Florida to Detroit by air, arriving

at retail centers in Detroit, at practically the same price as by surface carriers.

Principal advantage of the air shipment, Wickard pointed out, is an improvement in quality of fruit or vegetable, by permitting it to ripen in 48 national days, through increase in palatability, vitamin content and yield per acre.

Vitamin Losses—Dr. George K. Anderson reported that losses of from 20 to 50 percent in vitamin C content within a week's storage of fresh fruits and vegetables, and that similar losses of other vitamins content also were found. Dr. Anderson, secretary of the American Medical Association's council on food and nutrition, predicted that economical air transportation of fruits and vegetables would have an important influence on the public health, by eliminating nutritional deficiencies, and supplying vitamin-rich fresh foods.

Less optimistic view about the immediate prospect of 15 cents a ton-mile rates was taken by J. Prescott Blount, manager of produce at the National Air Cargo Association, speaking for William A. Patterson, UAL president.

New Equipment Factor—"It may be several years before the domestic airline can offer rates as low as 15 cents per ton-mile," he said. "Even considering that shaper and container will perform pickup and delivery service at their own expense, we cannot expect to transport any cargo traffic with present equipment that will be available immediately after the war at a rate of 15 cents per ton-mile or less. While



PERISHABLES FLOWING:

TWA plane at Los Angeles loaded almonds, artichokes, carrots, Imperial Valley lettuce, asparagus, broccoli and Utah celery for shipment to the national air cargo conference at Detroit.

direct flying costs of larger transport now used on military and naval service may run less than 15 cents per ton mile, it must be reduced to an equivalent rate payable to avoid deterioration of such things as plane utilization and cargo load factor would be quite hazardous."

Early Loss Possible—Blount said it may be necessary to develop perishable traffic by taking a loss for a year or two, if that will result in sufficient volume to justify continuance of rates which have prospect of becoming economically sound. He urged an educational program showing consumer benefits of fresh airborne fruits and vegetables, with products having identified as airborne, a study needed to get airports as close as possible to the immediate producing areas to eliminate expensive trucking to remote airports' plans to develop airport (beyond) fruit and vegetable market facilities. He reported his organization is making a study in a pressure chamber at Chicago on effects of altitude and various temperatures on selected fruits and vegetables.



HAWAIIAN LIES FLOWN TO DETROIT MEETING:

Secretary of Agriculture Claude Wickard receives a lot of tropical produce, shipped by air, from American Airlines' Betty Anne Wilson, at the Detroit Air Cargo luncheon. At Wickard's left is Col. Edward S. Rouse, Detroit air cargo pioneer, whose grant made possible the Wayne University study on potential shipment of fresh fruits and vegetables by air. The luncheon menu included a wide variety of such foods, shipped by airline as a demonstration.

CAB Cites Commercial Hazards In Aviation Reinsurance System

Study points out international business relationship whereby important data may reach foreign interests to detriment of American world trade.

By MERLIN MICKEL

The Civil Aeronautics Board, in a current study on aviation insurance, calls attention critically to an international business relationship whereby information may reach foreign interests "to the detriment of our foreign commerce, or perhaps even to our national security."

Stemming from the heavy reliance by American aviation insurance underwriters on foreign insurance sources for their reinsurance, the Board finds, despite the presence in America of adequate insurance assets. These assets are sufficient, the study showed, to develop an independent American market sufficient to handle present and future insurance needs of American air commerce.

Growing Interest. Moreover, the Board found evidence of growing interest in aviation insurance by insurance companies in this country not now underwriting aviation risks. This might indicate the situation may correct itself.

In addition to the foreign reinsurance problem, the Board found possible significance in the hearing of insurance costs on distribution of air traffic, and pointed out that it is important to future international air cargo development that insurance be available on American flag air carriers at rates favorably comparable with those on foreign air carriers. Such matters, the report said, have a bearing on the national welfare as well as on the development of American aviation.

Reinsurance Pool. An avowed need for reinsurance availability here, the Board stated that "formation of an American aviation reinsurance pool or pools seems to be highly desirable as a means to establishment of a strong American aviation insurance market, and for the full utilization of American insurance resources in connection therewith." Removal of its own difficulties in obtaining information, the CAB urged that data on the aviation insurance

market be published periodically in summary form to be available not only to interested government agencies but also to purchasers. Such procedure, it was said, would make "substantial contribution" to self-regulation of the market.

Three Groups Discussed. The Board said the information it has, much of which was submitted confidentially, would not permit final conclusion as to whether the functioning of the market had not been consistent with the public interest in aviation development.

A single federal agency to collect such data was proposed, with comment that reporting of such information on a nationwide uniform basis is necessary to a proper appraisal of the aviation insurance market.

Three groups of insurance companies—Aero Insurance Underwriters, Associated Aviation Underwriters, and United States Aviation Underwriters, Inc.—were found to dominate the American aviation insurance scene. During 1962 these wrote all but 4 percent of the aviation insurance reported to the New York State Insurance Department.

Volume Increases. Acknowledging that other companies write relatively small amounts, the Board confined its studies to these three leading groups. It found their underwriting experience "very favorable," with "substantial profits" of \$4,484,322, or 28.4 percent of po-



Seeing eye for an engine's blind spot

You can't determine an aircraft engine's full power potential with a slide rule—no more than you can judge a sprinter by the length of his legs. An individual motor's capacity is some times far greater than its listed horsepower.

So rated horsepower is often a blind spot, the point beyond which a pilot can't peer on power lost detection dampen engine performance—or even worse it. But, Standard of California scientists, gauging new aviation fields, had to know the actual output rating of aircraft engines—so they worked out a Detection Indicator.

With this device as guard, motors can be fully unleashed—often far beyond listed horsepower. Speed and critical altitude can be boosted, fuel economical—and detection checked. When the engine is pushed to the detection point, the in-



dicator flashes a warning to the pilot. Then he knows it's time to throttle down.

We've licensed the Lane-Wells Co. of Los Angeles to manufacture and sell this Detection Indicator equipment so that it can be made available to others on war jobs. In many laboratories it's helping improve aviation gauges—and the engines that use them. And its story is just one page from our research notebook. As you read this, Standard of California is developing new ways to push back sky frontiers, new seeing eyes for aviation's blind spots.

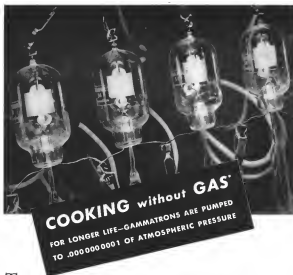
STANDARD OF CALIFORNIA



UNITED'S ATC PLANES LOSE WAR PAINT:

The 288 man-hours originally required to remove the war paint from the big ships used by the Air Transport Command have been reduced with a soluble paint remover. Sprayed on the drive disk, this causes bubbles which crack the paint and ease the scraping process. Photo shows cleaning process on one of planes operated by United Air Lines contract for the ATC. The shift to the plane's own natural "inflow skin" will lighten it 200 pounds and increase cruising speed approximately seven miles per hour.

process. Photo shows cleaning process on one of planes operated by United Air Lines contract for the ATC. The shift to the plane's own natural "inflow skin" will lighten it 200 pounds and increase cruising speed approximately seven miles per hour.



These Gammatron tubes are being submitted to an exhaust process so severe that only tubes made with tantalum elements can withstand it. They are "cooking" at 3,000° F. running at this temperature from 30 to 40 minutes. At the same time they are being pumped to create a vacuum equal to one ten-billionth of atmospheric pressure... the best commercial vacuum obtainable.

Heintz and Kaufman Ltd. has perfected such a rigorous pumping process to protect Gammatron tubes from filament bombardment. If many gas molecules remain in an evacuated tube, electrons traveling from the filament to the plate strip these molecules and ionize them. These ions, being positive, dart toward the filament, hitting with such force they strip the filament

of its coating. This action, termed filament bombardment, materially shortens the life of a tube.

The severity of the Heintz and Kaufman exhausting process assures superior protection against filament bombardment, and thus adds to the operating life of all Gammatrons.

(Physically, but not precisely true. Even at .0000000001 of atmosphere pressure there are two billion gas molecules in the entire cross-section of evacuated space.)

HEINTZ AND KAUFMAN LTD.
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FOR VICTORY AND SECURITY BUY WAR BONDS

minutes for airline insurance alone for the period 1933-1943, and \$2,927,943, or 55.9 percent, for the period 1937-1941 when all classifications of aviation risks were considered.

Heavy increase was noted in volume of premiums since 1933, earliest year for which these data were available, but the observation that aviation insurance will increase in importance. Absence of competition between the three leading groups was evaded as to non-airline business, and the board found lacking "affirmative evidence of competition" in airline premium rates and practices.

Cooks Criticized.—New York, incidentally, appeared as the only state in which aviation insurance reports are filed, and the only one to have undertaken regulatory action. The market as a whole is without governmental regulation.

As evidence of the importance of aviation insurance costs, the board pointed out that for 1943 that expense exceeded \$2,655,066 for all domestic airlines, ranging from 3.3 to 6.9 percent of total operating expenses for the various carriers. Complaints have been made that airline insurance costs are too high and the market too restricted, and the Board said it was concerned over insurance costs as a factor in mail, passenger and property rate determination.

Liberators Used As Camera Planes

Northwest Airlines has disclosed that special Consolidated Liberator bombers equipped with a battery of six super-eye cameras instead of bombs are being turned out at the company's St. Paul bomber modification plant.

The planes have been used secretly for several months on reconnaissance work in both the European and Pacific theaters. First of this type craft was prepared last fall, after the AAF Materiel Command called Northwest engineers and technicians personnel to assist and collect the needs.

Backpack.—A backpack was constructed. Workers stripped a B-24 of all bombing equipment, installed that tanks in front bomb bays to increase the ship's range. All bomb racks and other structural obstacles were removed and the crew deck moved to permit head clearance for a photographer. Five windows were cut for cameras and special protective glass put in.

CAB Hearing in N.Y.-Boston Case Centers on Need for Competition

Big four airlines and three smaller air carriers present oral arguments in dispute over applications for lucrative field.

By DANIEL S. WENTZ

Oral arguments were presented before the Civil Aeronautics Board last week in the New York-Boston case. The lucrative New York-Boston run was the bone of contention, with all the big four as interested applicants, plus three smaller air carriers and numerous intervenors presenting their views in a two-and-one-half day discussion.

The case has had a long history before the CAB of many changes, amendments, and revocations of the consolidated route. The original preliminary conference was held in 1941 and hearings followed in September, 1943. Examiner Thomas L. Wren, in his report last January recommended extension of Northeast Airlines' route from Boston to New York, and the addition of five intermediate points on American Airlines' Route 18 plus two additional intermediate points on that line's AM 21. During the oral arguments, the examiner's report was under heavy fire from practically all applicants except Northeast.

Competition.—The competition question arose in the attempt by counsel to show who should com-

pete with American, only presently certificated operator between New York and Boston. The examiner, public counsel, and all applicants agreed that the volume of traffic over this route would bear more than one-carrier operation.

The case for the small regional carriers versus the big national system was argued by J. Raymond Hoover, counsel for Northeast, and Seth W. Richardson, for Colonial Northeast, having Examiner Wren's blessing, expanded its previous arguments, pointing to the large volume of local traffic in New England which, it was claimed, could best be served by a line whose main interest was in local traffic. The extension to New York Hoover said, would make Northeast self-sufficient, and provide surely needed local service in the most densely populated area of the United States. Amongst American's New York-Boston operation over AM 10 is an "undifferentiated old-killed wingman," Richardson exhorted the Board to protect the position of the small carriers.

Open Field Asked.—Paul M.



UNITED MODIFIES \$400K FORTRESS

United Air Lines' modification center at Chertemps has turned out the 3,566th B-24 Liberator. The C. Baker, wife of the businessman general who commands Allied Air Forces in the Mediterranean area, is shown getting a flashing touch on the "2,500th Modification for Hitler." Members of the crew of "Bill's Angels," another Flying Fortress, look on, with Capt. John M. Johnston, pilot, in the new ship's window.

Goeders, assumed for United, called for wide open competition over the route, claiming that Boston is entitled to service by all three transcontinental carriers. Goeders also took the position that the large carriers could provide all the benefits of small carrier service plus additional advantages.

Rumors' Content. E. Boyette Garfield, new executive in charge of a north-west route. Rumors, he said, has been the leading approach among the airlines in local traffic, and would be desirous of serving the local needs of the north-west. He also expressed Rumors' intention of developing what he called "medium haul service" between Boston and Washington. TWA and United, he said, should be given priority to Boston only from the west.

TWA's Stand.—George A. Spahr, counsel for TWA, said Northeast could not compete successfully with such a large line in America. He said that if competition were needed, TWA would be in a much better position to provide competition that would result in refinement of service between New York and New England as well as a second transcontinental outlet for the Boston area.

Claiming that, despite the enormous traffic potential over AM 16, the short distance and frequent stops increased operating costs and made net profits very small. Hamilton O. Hale, counsel for American, urged the board not to consider any American "exception for competitor's sake." On this point, he said, it would be to be destructive rather than a public benefit. He disagreed with the philosophy of attempting to nourish small unprofitable carriers by giving them new routes, stating that the formation of a sound transportation pattern for the nation would be better implemented by trying such lines into larger self-sustaining systems.

Duplication of Facilities.—Public Counsel Henry L. Hill pointed out that competition is not mandatory under the Civil Aeronautics Act. He said there is little need for it at present as the industry toward better service. He added that duplication of facilities and expense might have a tendency to make it uneconomical.

Among the interveners were E. W. Wiggins Airways, the Boston Port Authority, the Commonwealth of Massachusetts, the State of Ohio and City of Cleveland, and the State of Connecticut.

Application Asks Seattle-Miami Route

Prarie Airways files for permit for spins to cross U. S. diagonally.

A large system of airlines, cutting the continent diagonally from Seattle to Miami, was proposed by Prairie Airways, Inc., of Alliance, Neb., in an application filed with the Civil Aeronautics Board for a permanent and/or temporary certificate covering 7,000 miles. Scheduled transportation of persons, property and mail by conventional type aircraft is planned. In addition to the Seattle-Miami route, they ask certificates between Sheridan, Wyo., and Chicago, Great Falls, Mont., and Kama, Alaska, Casper, Wyo., and Seattle, and Kansas City and St. Louis. The company, which presently owns no aircraft, was formed by business, professional and students in Nebraska.

Helicopter System.—A helicopter system to serve the Greater New York area is requested in an application by Metropolitan Airways, Inc., of New York. They propose to carry persons and property in a scheduled service connecting La Guardia Airport, Midtown Airport, the financial, shopping and entertainment centers of Manhattan and points in nearby areas.

For American Airways Corp., president of Pan American Airways, Inc., proposed to dissolve Cham-



DIRECTION FINDER:

New carriers in radio have been instituted by the Women's Division of the Royal Canadian Air Force at the RCAF's Wireless Training School, Montreal, where their direction finder is used as a piece of laboratory equipment.

Airway Federal, Inc. CAF, Inc., is holder of 1,072 shares, or 40 percent of the issued and outstanding stock of Cham Airway Airways Corp. The CAF stock would be acquired by Pan American Airways Corp. All present there are 50,000 shares of CAF, all owned by PAA, Inc. An application has been filed with the CAB regarding this transaction.

Air Taxi Service.—Yellow Cab Co. of Philadelphia has filed for an airtaxi taxi service by helicopter in the Philadelphia- Camden metropolitan area, with additional charter service to be made out to Atlantic City, Allentown, and Harrisburg-York, Pa. Persons, property, baggage and mail would be carried, and a scheduled service to outlying terminals is planned.

Chattanooga, Newport and Covington Railway Co., a bus and aircraft operator, have filed for a permanent certificate covering scheduled and charter transportation of persons, property and mail by conventional aircraft over the Chattanooga-Knoxville route. One route would serve the Chattanooga-Knoxville-Norfolk-Kenansville network area, and others would connect that area with Louisville, Ashland, and Bowling Green, Ky. A non-scheduled freight service using airplanes, helicopters, or commercial gliders to convey perishable and high grade food and medicinal products between the U. S. and Canada, Alaska, the West Indies, Central America, and South American countries was proposed by Producer's Air Lines, Inc., of Toledo, in an application for a permanent certificate.

R. J. McKewen, president of the corporation, in the head of a common motor carrier.

Canadian Air Group Plans Flight Strips

Flight strips for every Canadian town of more than 1,000 population, to be built immediately after the war, will be proposed by the Aeronautical Institute of Canada at the first national conference under its auspices at Toronto, May 8-9.

The institute's President, C. B. Patterson, estimated that the strips would cost about \$50,000 for the smaller towns and proposed that the towns provide one-third of the cost, the federal and provincial governments supplying a third each. Total cost of the program is estimated at \$20,000,000.

Feeder Hearings Set for April 5-6

With preliminary work on the local feeder-gateways investigation complete, the proceedings will come up for hearing before the Civil Aeronautics Board April 5 and 6. Two days will be allowed for arguments and time allotments to individual parties have been made. It is significant that the largest time allotments have been made to the Greyhound Corp., All American Aviation, the Airline Pilot Association and public counsel. Greyhound and All American are expected to present the points of view of bus operators and gateways operators respectively.

Schedule.—The list of those appearing in order of appearance and minutes to each is as follows:

Associated Truck Lines, 30 Burlington Transportation Co., 34, W. J. O'Neil, 35, 36, 37, 38, 39, Greyhound Corp., 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.

Airlines May Have To Build Own Ports

Indications that commercial air carriers some day may be forced to construct their own airports is contained in the "statement of principles" adopted by the Civil Aeronautics Board's Advisory Committee at a one-day meeting in Washington. The subject has been given some attention in the air transport industry.

The eight aviation groups represented at the session asked that any legislation providing that airports constructed or maintained in whole or in part by public funds shall have reasonable provision for the use of airport facilities by private and non-scheduled aircraft.

While much would rest on the construction of the word "reasonable," many authorities have been advocating complete separation of commercial and private flying ac-

tivities, and the stand taken by the eight-group committee viewed as an effort to forestall this trend. Safety and traffic considerations might then force a change in present systems of headfirst commercial entry.

Representative Air Groups.—Members of the Joint Committee are representatives of the Aeronautical Association of America, the American Association of Airplane Owners, the Aviation Distributors and Manufacturers Association, the Early Birds, Aviation Insurance Group, the National Aeronautics Association, the National Association of State Aviation Officials, the National Aviation Trades Association, William P. McCracken Jr., Washington attorney, is chairman.

The statement, spokesmen said, is being referred to the Aeronautical and State Departments and the War Relocation Authority, with a request that a bill be drafted incorporating the principles, or that amendments to presently pending legislation be prepared for bringing this legislation into conformity with the desires of the committee.

Safety Restrictions.—Other provisions of the statement ask that air space restrictions be only those necessary for safety requirements, national defense, and sound economic development of aviation and foreign air commerce; that the federal authority have power to make recommendations for aeronautical changes of airports and to make safety regulations pertaining to the construction, maintenance and in-flight operation on and off airports used in interstate scheduled air transport, but leaving it left to the states that there be a clear-cut distinction between scheduled and non-scheduled carriers and that non-scheduled carriers be subject to a maximum of regulation consistent with safety.

Also, that federal funds be for the direct training of civilian pilots, technicians and mechanics be expended under contract with private enterprise, that independence of the federal aviation administrative agency be restored, with legislation restricting powers of the "commission and administrator" so that all interstate operations came under jurisdiction of the state, and that federal funds should not be a subject of a federal legislation, that there be an independent air safety body, and that no federal legislation be enacted with respect to aviation insurance.

Burden Predicts 30% Air Fare Cut

Airline passenger fares can be cut as much as 30 percent before Pullman fares in the first post-war decade, William A. H. Burden predicted last week before the St. Louis Chamber of Commerce in his first speech since his appointment as Assistant Secretary of Commerce.

"Improvements in air transport services will mean that by the end of the first post-war decade the average moderately well-to-do American will do almost all of his traveling by air," Burden said. "The average amount of his short-distance traveling by air. Reducing very short-haul traffic as too difficult to decrease, we should transport by air in the United States at least 75 percent of the country's traffic a year, or 75 percent of pre-war passenger traffic." Burden foretold.

Railroad Express.—He also estimated that as much as 70 percent of present rail express volume may be moving by air.

Rails Issue Study Of Air Transport

Result of two years of research by a committee of the American Association of Airplane Owners is being circulated primarily to rail executives. The survey is largely factual and apparently designed to afford rail executives a basic knowledge of the air transportation techniques and costs.

The study does point significantly to the fact that the committee favors a sharply in revenue paid airlines and railroads for the handling of mail and to the facilities provided railroads at terminals in weather service and ground needs.

Credit. H. H. Express—It credits the Railway Express Agency, Inc., with financing and development of an air line in this country and reports that 20 percent of air shipments move part way by rail.

The railroad committee asserted that "adequate consideration has not been given to integration of air transportation policy with a broad program covering all agencies of transport, not but it sufficiently considered the development of coordination between air, land, and water transport — sound policies can spring only from an informed public opinion."

Survey Shows Airline Operations 7.3 Percent of Plane Traffic at Ports

Check on fields serving 118 large cities reveals that military itinerant and local servers are responsible for bulk of activities.

Check of airports serving 138 large cities shows that scheduled air carriers during January represented 7.3 percent of aircraft operations. Of 1,033,455 takeoffs or landings, the air carriers were responsible for 77,286, the remainder being accounted for by the military, commuter and local services.

There is no evidence that the percentage of scheduled air carrier movements to total operations will move upward after the war. Most experts believe the percentage will move downward, especially if the great increase in private flying being predicted by government sources takes place.

► **Comparisons** — January figures show that at only a few airports did the commercial carriers account for any appreciable part of total traffic in and out of the air terminals. At Chicago, Jacksonville, New York, Pittsburgh and Washington, the scheduled carriers accounted for about half of the movements, but at the remaining points under survey, the other groups far surpassed the commercial lines in aircraft operations.

Some idea of the traffic comparisons may be seen from the adjoining table of part of the IIS airports under study.

These figures emphasize the importance of airport facilities to post-war commercial and private flying. Few, if any, of the airports around the country are operating at a profit. One of the reasons may be because they are generally managed by persons not trained in the business field. In other words, not enough attention has been paid to merchandising the airport.

Before the war, for example, the Washington National Airport actually made money. These officials merchandised aviation: a fee to watch airplanes from particular spots—fine restaurant and cocktail service—etc. The same type of business management must be carried on at all the airports if the economists hope to break even. There are many sources of revenue for airports other than revenues derived from strictly aeronautical

activities that must be evaluated

Port Without Stalled The scheduled air carriers are anxious to assist the communities wherever possible with their airport problems. They presently are responsible for approximately one third of airport revenues. Two committees already have been formed among the airlines to study airport facilities. They are working through the Air Transport Association, and they have on their agenda for consideration everything from the consolidation of airport services to the sale of post cards.

One of the more specific points under consideration is a uniform airport lease. At present an airline serving 20 different cities would have a large number of assorted leases. While a standardization of leases might not swell revenues to the airport, it certainly would establish a formula by which revenues to accrue from an airport would be more predictable. Carrier operations could be forecast with accuracy, thereby permitting an airport to determine the additional revenues which would be needed in order to keep out of the red.

Annual Operations (Thousands of Pounds)			
	Scheduled Passenger Carriers	Other Scheduled Passenger Carriers	Freight
1967	1,136	1,017	1,011
1968	1,211	1,071	1,071
1969	1,268	1,136	1,071
1970	1,311	1,191	1,121
1971	1,361	1,241	1,171
1972	1,411	1,291	1,221
1973	1,461	1,341	1,271
1974	1,511	1,391	1,321
1975	1,561	1,441	1,371
1976	1,611	1,491	1,421
1977	1,661	1,541	1,471
1978	1,711	1,591	1,521
1979	1,761	1,641	1,571
1980	1,811	1,691	1,621
1981	1,861	1,741	1,671
1982	1,911	1,791	1,721
1983	1,961	1,841	1,771
1984	2,011	1,891	1,821
1985	2,061	1,941	1,871
1986	2,111	1,991	1,921
1987	2,161	2,041	1,971
1988	2,211	2,091	2,021
1989	2,261	2,141	2,071
1990	2,311	2,191	2,121
1991	2,361	2,241	2,171
1992	2,411	2,291	2,221
1993	2,461	2,341	2,271
1994	2,511	2,391	2,321
1995	2,561	2,441	2,371
1996	2,611	2,491	2,421
1997	2,661	2,541	2,471
1998	2,711	2,591	2,521
1999	2,761	2,641	2,571
2000	2,811	2,691	2,621
2001	2,861	2,741	2,671
2002	2,911	2,791	2,721
2003	2,961	2,841	2,771
2004	3,011	2,891	2,821
2005	3,061	2,941	2,871
2006	3,111	2,991	2,921
2007	3,161	3,041	2,971
2008	3,211	3,091	3,021
2009	3,261	3,141	3,071
2010	3,311	3,191	3,121
2011	3,361	3,241	3,171
2012	3,411	3,291	3,221
2013	3,461	3,341	3,271
2014	3,511	3,391	3,321
2015	3,561	3,441	3,371
2016	3,611	3,491	3,421
2017	3,661	3,541	3,471
2018	3,711	3,591	3,521
2019	3,761	3,641	3,571
2020	3,811	3,691	3,621
2021	3,861	3,741	3,671
2022	3,911	3,791	3,721
2023	3,961	3,841	3,771
2024	4,011	3,891	3,821
2025	4,061	3,941	3,871
2026	4,111	3,991	3,921
2027	4,161	4,041	3,971
2028	4,211	4,091	4,021
2029	4,261	4,141	4,071
2030	4,311	4,191	4,121
2031	4,361	4,241	4,171
2032	4,411	4,291	4,221
2033	4,461	4,341	4,271
2034	4,511	4,391	4,321
2035	4,561	4,441	4,371
2036	4,611	4,491	4,421
2037	4,661	4,541	4,471
2038	4,711	4,591	4,521
2039	4,761	4,641	4,571
2040	4,811	4,691	4,621
2041	4,861	4,741	4,671
2042	4,911	4,791	4,721
2043	4,961	4,841	4,771
2044	5,011	4,891	4,821
2045	5,061	4,941	4,871
2046	5,111	4,991	4,921
2047	5,161	5,041	4,971
2048	5,211	5,091	5,021
2049	5,261	5,141	5,071
2050	5,311	5,191	5,121

Every community wants an up-to-date airport. In some cases, however, communities will join together and maintain one airport. The time may come when the air carriers, operating in cities where the volume of scheduled air traffic is sufficiently large to warrant an airport for strictly scheduled air carrier use, will be forced to build and to maintain their own airport facilities.

CAB to Allocate Returned Planes

Allocation of the nine planes unofficially reported on their way back to the airlines from the Army is the first job of this nature to come under the new setup whereby the Civil Aeronautics Board, instead of the Army, has the responsibility in these matters.

CAN's determination of the manner in which the mine shall be distributed is understood to have been made, but the process has not been completed.

Planes Total to 34—This will bring to 34, not counting replacement, the number returned since the Army took over a large portion of the airlines' equipment almost two years ago. It also brings the total for airline operation to 266, the wartime limit set by presidential order.

Likelihood that this limit may be relaxed was seen, however, in another unofficial report that the navy plans constitute only part of those the Army feels it can release for the airlines' commercial service. Some sources say an additional 25 to 35 ships may soon become available.

Meanwhile, details are being worked out on the new plan whereby responsibility for returned plane allocations has been turned over to the Civil Aeronautics Board by the War Department.

Method. In brief, the method of allocation follows this pattern. The Army notifies the CAB that it expects to be able to release a given number of planes. The Board then works out its allocation plan, which is submitted and sent back through the same Army channels for submission to the Munitions Assignments Committee for Air. This is a subcommittee of the Munitions Assignments Committee of the Maritime Assignments Board. This group, on the subcommittee's recommendation, then assigns the retained share.

Army Chiefs Attend Weir Cook Ceremony

High-ranking Army officers attended ceremonies in Indianapolis last week marking the dedication of the municipal airport named for 1st Lt. Col. H. Worr Cook, an aviator pilot of World War I, who reentered the Army shortly before Pearl Harbor and fell to his death in the South Pacific a year ago.

Some 2,500 persons including Lt. Gen. Joseph T. McNarney, assistant chief of staff, and the son of the late pilot, Aviation Cadet Worr Cook, Jr., attended the memorial luncheon and dedications which climaxed a four-day aviation exhibit in the Indiana War Memorial Plaza.

• **234,000 See Displays**—An estimated quarter-million people viewed Materiel Command displays of military aviation equipment, and other exhibits shown by Indiana aviation manufacturers, housed in three streamlined tents.

Among those paying tribute to Col Cook at the banquet were Maj Gen Walter H. Frank, Air Service Command, John F. Curry, Western Technical Training Command, Denver, Jacob Fickel, Eastern Technical Training Command, St. Louis; James L. Collins, Fifth Service Command, Columbus, Brig Gen Franklin G. Carroll, engineering division, Materiel Command, F. W. Evans, First Troop Carrier Command and Lieut Col Kacie Johnston, national commander of the Civil Air Patrol.

Other speakers included Gov. Henry F. Schricker, of Indiana, Maj. Gen. Robert Tyndall (retired) mayor of Indianapolis, Col. Ramon Turner, president, National Aviation Trades Association, C. Walter McCarty, managing editor, Indianapolis News, treasurer, and Chairman Walker Winkler, manager of the airport.

Airline Operations Show Sharp Gain

Figures on January operation by 16 domestic airlines, from the Civil Aeronautics Board, show increases over the 1943 month of 51 percent in mail pound miles, 22 percent in express pound miles, 24 percent in revenue miles, and 42 percent in revenue passenger miles.

Here are the comparisons between last January and January, 1943: revenue miles flown, 9,478,648 and 7,628,633; revenue passen-

ger males, 141,133,038 and 99,392,392; mail pound miles, 7,899,239,336 and 4,673,678,644; express pound miles, 2,621,141,582 and 2,153,328,335; passenger load factor, 82.69 and 77.91 percent).

Load Factor—The January passenger load factor, or percent of seats occupied, was based on 18 average available seats a mile, against 37½ a year earlier. The plants flew 91 percent of scheduled mileage in January, the average load being 16 passengers, 747 pounds of mail and 377 pounds of express. January, 1943, loads averaged 13 passengers, 614 pounds of mail, and 283 pounds of express.

New Canadian Policy Clouds CPA Plans

Canadian Pacific Airlines' plans, in connection with the Canadian government's policy that all airlines must be divested from surface transportation ownership within a year of the end of the European phase of the war, apparently are in doubt.

Commenting on the government's announcement, made only recently, D. C. Coleman, chairman and president of the Canadian Pacific Railway Co., stated that following the investigation in 1949 by the Board of Transport Commissioners of the operation of small airline companies, the CPR, "with the encouragement and approval of the government, undertook to acquire control of a number of the competing airlines and consolidate their operations."

Heavy Investments Cited—"Every step in this process has been taken with the full knowledge and approval of the authorities and the company, in good faith has invested a large sum of money which cannot be expected to yield any return for some time to come."

He pointed out that in the operation of seven air training schools, the CPA has returned the entire profits voluntarily to the government, that the CPR in 1918 was authorized by special act of Parliament to operate air services, that the company's first air undertaking was buying stock on an equal share with the government-owned Canadian National Railways in Canadian Airways Ltd. and that the government's move was a radical departure, since in Canada the two railways operated not only trains but also steamships, telegraphs, airmails, express services, buses, trucks and hotels.



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Air Cargo Survey Shows Post-War Rise

Field men report wide interest in low-cost air freight service.

Reaction in the business world to the survey of post-war air freight possibilities being made by Air Cargo, Inc., lends officials of that organization to believe marked expansion of air cargo transportation can be expected.

Industry's response has been "highly encouraging" to the field men currently conducting the survey in 14 major market areas. They report that it has developed wide interest among business men in the effect on their enterprises of the development of low cost, fast air cargo transportation. These men, Air Cargo officials say, have been "most cooperative" in supplying the required data.

Shipping Practices Studied.—The organization's analysts are studying shipping and distribution practices among a selected group of representative manufacturers, wholesalers and retail companies, and service and financial establishments. The survey is aimed at determination of industries in each market area that will most widely use air cargo transportation, and effect of expanded use of air shipment on sales and distribution policies.

Studies are covering possible expansion of market areas, reduction in cancellations and returns, economies in warehousing, reduction of inventories, reduced packaging costs, effects on distribution of style merchandise, and air shipment of perishables. It is hoped that it will establish service requirements of shippers and receivers as to pickup and delivery methods and times, and requirements for special handling.

Covers 30 Major Markets.—All this information, say those in charge of its assembly, will help determine type and size of plane to provide most efficient operation for increased air shipment volume for anticipated when planes are available for commercial use. A related part of the study has to do with airport cargo and ground handling facilities, package and delivery services, customs and taxes.

Scheduled for completion by June 30, the study is to cover eventually the 36 major market areas in the United States, with attention to international as well as domestic shipments.

Already it indicates that in some industries shipment by air may become a major method of transportation. Few industries have been found which will not find place for a "substantial use" of air transport, Air Cargo men say, even though it may not replace surface transportation for the bulk of their shipments.

New Tail Wheel Unit

A new automatic tail wheel assembly has been developed by Scott Aviation Corp. engineers, who say it combines the advantages of both the steerable and full swivel types, along with automatic features of operation. It is designed to fit practically all types of light aircraft.

CAB ACTION

● Civil Aeronautics Board called a meeting of the Committee of Commerce and Transportation on the four transportation bills (H.R. 2400, H.R. 2401, H.R. 2402, H.R. 2403) on June 10. The committee will report to the House on June 15.

● Western Air Lines has been notified by the House to begin service over Alaska between Seattle and San Francisco. Scheduled also will be Seattle and Portland.

● Pan American has received permission to operate service between Miami and Mexico, including July 1. The Air Line Commission stated that flight must be started by July 1 and that flight must be between Miami and Mexico City will be successful.

● Proposed purchase of Eastern Air Lines Inc. by Atlantic City has been held to date by the Federal Reserve Board. The board has stated that it is not in a position to approve the purchase of Eastern Air Lines Inc. by Atlantic City. The board has stated that it is not in a position to approve the purchase of Eastern Air Lines Inc. by Atlantic City.

● A business meeting and dinner, in a new building under construction on the Washington-Capitol Mall, will be held on June 11. The building is being constructed by the U.S. Government. The building is being constructed by the U.S. Government.

● A meeting of the new meeting, Eastern Air Lines Inc. will be held on June 11. The meeting will be held on June 11.

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Domestic Airlines Resume Plans For New Financing Operations

Total funds needed for entire air transport industry expected to reach 700 million during next ten years, according to estimate based on TWA's forecast of 160 million required by 1954.

By ROGER WILCO

After a short breathing spell, the airlines have resumed their place for a search on the capital markets. Northwest Airlines will soon offer its stockholders "rights" to subscribe to 117,660 shares of additional common stock. All unsubscribed shares will be underwritten by investment bankers. In another market move, the airline may realize gross proceeds of about \$2,500,000 from this transaction.

It is noteworthy that Northwest is continuing the practice of the industry in looking to equity capital for new funds. Favorable market conditions have undoubtedly encouraged this pattern. The nature of airline operations, low but favored stock issues in preference to other forms of financing. It is questionable, however, if equity issues will continue to predominate in the future plans of the industry.

National's Plans.—The projected plans of National Airlines, in this connection, are particularly significant. This carrier recently announced that arrangements have been made for the private financing of its new operation (Jacksonville-New York) as authorized by the Civil Aeronautics Board. No public stock or bond offering is contemplated according to the company's president. Further, National hopes to avoid flotation of new security issues if additional new routes are obtained as a result of its extensive applications now pending before the CAB.

Where, then, will National obtain the necessary funds? Most likely this will be forthcoming with the assistance of private bankers and may logically be expected to take the form of equipment notes or similar paper. Lehmman Brothers has previously

appeared in the National picture and in view of the profitable association may continue to remain. The banking firm was last reported as offering an option to purchase 10,000 shares of National's common stock at \$17.50 per share on or before April 15, 1954. This option was treated as an endorsement of just financial assistance. With National's common stock currently selling at 18 1/2, 16 asked, the profit is self-evident.

Baker Holds Similar Option.—O. T. Baker, National's president, holds a similar option for a like number of shares. It is obvious that both options will be exercised before their date of expiration—if they have not been done so already. As an incidental result, the air carrier will issue a total of 20,000 additional shares, receiving in return, \$1,125,000 in cash. Further, this will bring the total capitalization to 100,000 common shares, and representing the carrier's sole security.

The full extent of National's future financial requirements is not indicated. The authorized new operation, however, heralds a substantial capital outlay.

Outline.—The ultimate financial requirements of the industry as a whole are beginning to assume a rough outline. TWA's executive vice-president, E. Lee Talbot, recently forecast that his company's capital expenditures and requirements by 1954 for domestic operations alone would be about \$188,000,000. Applying the same measure to the entire domestic air transport industry would result in an aggregate projection of about \$780,000,000 as the group's capital outlay during the next decade.

Talbot will represent a monumental financing job and it is questionable if the full portent of the task

ahead is clearly recognized by the airlines and the financial community.

A few comparative facts will illustrate. Total resources of all domestic airlines, at last count, aggregated about \$168,000,000. During the past eight years, 34 separate air carriers sold a total of 27 individual stock issues to gross about \$18,000,000 in new funds.

Ten-Year Program.—Now then, if Talbot's projection is sound, the industry in the next ten years will be required to increase its capital about seven-fold and obtain more than 15 times the amount of new money than it did during the last eight years.

In the past, new money has been obtained primarily from marketing additional stock issues. The risk characteristics of the industry favored this course. Further, small stock capitalizations made it expedient to issue additional shares. For example, while Northwest will add 117,660 shares, its total common stock capitalization will then only amount to 330,360 shares, which isn't too diffuse for a major corporation.

Capitalization Problem.—However, the carrier's stock has progressively diluted their existing stock equities by issuance of new shares and are close to the point where this continued practice may become increasingly difficult. The broad-based share capitalizations as evidenced by Boeing? In August, 1943, this operator did some additional financing, which resulted in an increase from 443,000 to 1,000,000 shares outstanding. [A stock dividend accounted for this increase.]

One of the reasons for the underling financial strength of the aircraft industry today can be attributed to the small equity capitalizations. Most of the companies have retained throughout the war-inflated years. By using supplementary financial media, the aircraft builders have been able to largely avoid increasing the volume of operations to the profit of these stockholders. The deflationary process will, as a consequence, be less drastic on the basic financial structure of the industry than would have followed had the companies been forced to issue amounts of "permanent" capital.

Disseminated Paper.—The experience of the aircraft and other industries along with the ever-changing complexion of the air carriers themselves may well point

to the answer's employing diversified "paper" in the future. It is likely that equipment trust notes, bank and other short-term loans may finance the "flying assets" while equity money may take care of the other capital requirements. Clear-cut manufacturers of this trend may come into evidence when the airlines will be called on to acquire the high-priced planes of the future with which young carriers expect to open service as soon as war exigencies permit.

War Hazards Cited In Douglas Report

Message accompanying financial statement forecast increased financial emergency with recoveries and constant terminations.

The remarks of Donald W. Douglas, head of Douglas Aircraft Co., made in connection with the company's financial report for 1943 are significant in the philosophy of the war which is being saved rather than profits is the first problem of war industries and because financial hazards and uncertainties of contract terminations and reversion threaten survival of these enterprises. Profits alone are not of primary importance.

The financial statement of the company backs up the philosophy. While establishing an all-time production record and new peak of \$47,487,500 in sales and fixed-fee billing, the Douglas Co. derived a net income of only \$9,092,297, a rate of only six-tenths of 1 percent of total volume.

Profits Subordinated.—National welfare, rather than the stockholder's earnings, becomes of paramount importance, and the normal rewards and aspirations of stockholders are set aside for the duration while the company becomes to all intents and purposes an adjunct of the federal government, operated in its behalf," Douglas said.

To this concept of non-participation duty to its government in time of war, the company authorities freely and fully," and Douglas.

Reciprocity.—He notes, however, that the government has not been able to obligate to industry, a duty to relieve by legislation the obstacles and uncertainties in the path of restoration of the company to peacetime activities without delay or impairment.

"Management's principal oblige-

ment to both stockholder and the nation likewise is the preservation of the company and its resources," Douglas says. "To speed victory and preserve the peace, the company must remain a direct instrument of national defense."

Disbursements.—Out of 1943 operations, the company paid \$385,000,000 in wages and salaries, \$50,000,000 in direct taxes to federal and local governments, \$560,000,000 to approximately 8,600 subcontractors and vendors and only \$3,900,000 to more than 9,000 stockholders. The number of stockholders increased during the year by 4 percent, but dividends per share showed no increase during the entire period of wartime operations, remaining constant at the annual rate of \$5 per share since 1939.

Highlights of the Douglas report included:

• Increase in production of more than 200 percent over 1942 and 1-1/2 times over 1941.

• Increase in production of more than 200 percent over 1942 and 1-1/2 times over 1941.

• It equals \$5-35 per share of earnings to the stockholder and earnings a share and 5 percent of the dollar volume of business, excluding salaries or bonuses alone.

A reserve for adjustment to income, including amortization amounting to 6 1/2 percent of sales, was indicated during 1943. The smallest net assets for contingencies, including war uncertainties and post-war risks, was \$6,000,000 or 0.1 percent of total volume of business. Thus, said the report, any, least reserves for contingencies to be 94 percent of current backlog and to a sum adequate for only two weeks of current production. After the contingency reserve and dividends, \$2,992,297 remained for earnings to add to surplus.

On Nov. 30, 1943, net working capital of Douglas was \$14,487,500. Unamortized debt and government securities available at the close of 1943 for current and future operations amounted to \$42,000,000. Bank borrowings at the end of the year were \$13,000,000 obtained from a \$40,000,000 credit.

770 percent over 1939. Productive floor space under company operation increased 33 percent.

• Unit costs to government on military aircraft produced by Douglas reduced an average of 25 percent on the company's six production models.

• Employment increased 100 percent and reached a high of 169,000 in August. Women accounted for 31 percent of all workers employed in direct manufacturing, 48 percent of total employment.

• Douglas produced 122,000,000 pounds of combat airplanes and spare parts, the greatest production by any one company. The bombers B-24 heavy bombers and 32 B-26 transports. Eight distinct models are in production and four new ones under development.

• The Douglas Co. has urged manufacturers to produce three 4-engine types—its own C-54 combat cargo transport; Boeing B-17 Flying Fortress and Consolidated B-24 Liberator. The company plans to offer the Douglas B-24 dive-bomber, the A-26 Invader and the C-47 Skytrain, military version of the DC-3.

Douglas noted that the aircraft industry "has assumed responsibility for liabilities staggering in size and proportion to stockholders' capital. Cash stress, though large in comparison to those of the industry before the war, are small compared to the liabilities assumed by the Government for losses, to the size of commitments to the industry's thousands of suppliers, to the value of wartime plant expansion and to wartime payrolls."

Financial Reports

Edward G. Budd Manufacturing Co. reports 1943 net profit of \$2,764,127 after taxes and reserve of \$600,000 for post-war recoveries, but before reorganization, compared with \$1,303,028, after reorganization and reserve of \$1,438,000 for post-war rehabilitation of plant in 1944. Sales were \$123,324,645 compared with \$119,200,000 in 1942.

Kellogg Aircraft Corp. reports net sales of \$11,297,106 for 1943—more than double those of the prior year. Net income for 1943 is listed at \$44,754 before reorganization, but before reorganization, compared with \$1,303,028, after reorganization and reserve of \$1,438,000 for post-war rehabilitation of plant in 1944. Sales were \$123,324,645 compared with \$119,200,000 in 1942.

McDonnell Aircraft Corp. declared regular quarterly dividend at \$1.30 per share payable Jan. 1, to stockholders of record Mar. 23.

Reconversion Chaos

CONGRESS has recessed until mid-April without taking positive action on uniform industrial demobilization. Contract terminations already total some \$8 billion dollars for all industries. Before the war ends the nation may have completed 46 percent of our war contracts. A popular view that this is a post-war problem is fallacious and dangerous. No group has more at stake in reconversion than the aircraft industry, which has risen from 4th in national dollar volume to first, merely on war orders.

Industry has not been entirely blameless. The aircraft industry itself, although maintaining a special committee on contract termination in the Aeronautical Chamber of Commerce, has not united to the point of utilizing it unanimously, and various companies are spending thousands of dollars a month working independently on this subject. A firm stand by the entire industry would have an important effect on Capitol Hill.

Even so, it is no secret in Congress that the leading industries have no major objections to either of the George-Murray bills. These are S-1718 for contract termination, and S-1736, the Demobilization Demobilization Bill containing the provisions of S-3718 intact as title III. Borah, Byrnes and Hancock probably would have no objection to the termination bill if they believed positive action by Congress would be forthcoming. Action by Congress is desperately needed on terminations.

Congress, however, is bogged down in duplication and overlapping, without common purpose. One element is the long post-up rearmament at the Executive branch. So far Congress has refused to take kindly to the Bureau report from the other side of town. Petty jealousies so far have prevented any unity on even legislation originating on the Hill. Meanwhile, most observers believe that if we do not get legislation passed by June we shall wait until after the November elections.

THERE ARE NOW at least 31 bills dealing with termination and reconversion being considered by ten committees in the House alone. The same situation exists in the Senate. Virtually without exception, when a reconversion bill is introduced in the House a companion measure is tacked into the Senate hopper.

Leadership in the Senate on this subject by more or less general agreement has been given Sen. George chairman of the Post-War Planning and Policy Committee, however, the subcommittee of the Senate Military Affairs Committee has taken considerable interest in the subject while the Senate Small Business Committee, headed by Sen. Murray, has also attempted to direct legislation. Another active group has been a subcommittee of the Senate Business Committee, called the Murray Contract Termination Committee.

The George Committee has issued numerous

reports but in very few has it agreed with other committees or other agencies working on the subject, and in several instances hasn't agreed with itself. The chief stumbling block is—will the Senate try to push an overall reconversion bill or will it break the subject up and pass separate bills on terminations, disposal of surplus property, financing reconversion, re-employment and retraining?

On this question the Senate staggered recently and it is still staggered. Some want to enact one measure trying it all up. Others say the subject is too big and should be divided. Meanwhile, nothing is done except methodical criticism of the Borah Plan, which has been the only definite program advocated.

ON THIS issue there has been even more disagreement and disunity. Rep. Vinson introduced a measure providing a separate termination of Navy contracts (apart from those of Army, Maritime, etc.), but so far he has brought forward no reason. He won't have separate machinery set up to deal with Navy contractors despite the fact that the same contractors may have contracts with the Army also.

Rep. Kefauver introduced a welded bill similar in part to the George Bill. The Colmer Committee, alleged to be the House counterpart of the George Committee, is in no sense moving in the same direction. It has held hearings, but has become hopelessly lost in a maze of testimony and to date has done nothing except duplicate the George Committee.

There is lack of agreement on the House side, too, whether terminations should be provided in a separate bill. Appearing before the Colmer Committee, John Hancock testified that if it was a bill on terminations that the Committee wanted, he could get one drawn up within two weeks that would have approval of all six procurement agencies. Nothing was done.

The Colmer Committee, the House Military Affairs Committee, House Naval Affairs Committee, House Judiciary Committee—all are studying reconversion legislation, and all are moving on different bills.

Meanwhile, Mr. Borah showed that he was becoming nettled at Congressional inactivity. He declared he was amazed that "our report has been in the hands of official Washington more than a month and there seems to be little disposition on the part of Congress to cooperate by moving along the lines we have indicated. Prestige or individual feelings should not be a factor. Who cares where a plan for meeting the shocks of returning peace originates? For my own part, I will accept a plan from any source, provided it will do the job."

Borah has a right to ask questions. So has industry.

Romero H. Wood

plane talk



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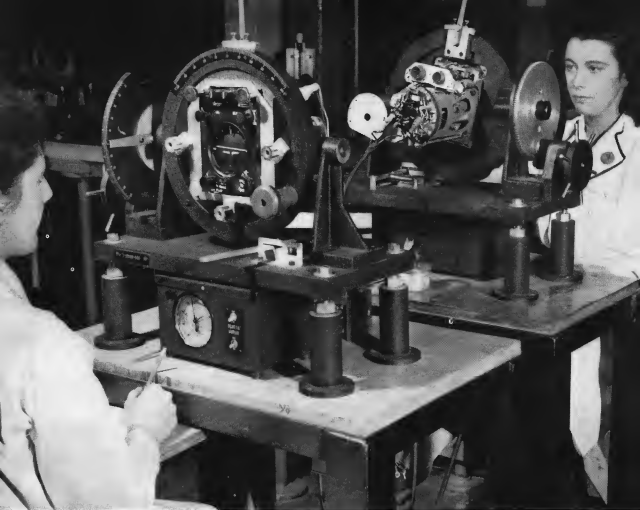
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